

FIG. 1

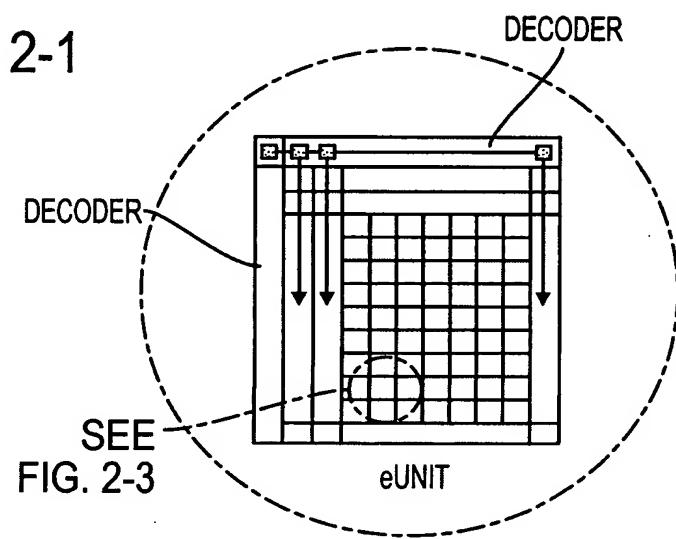
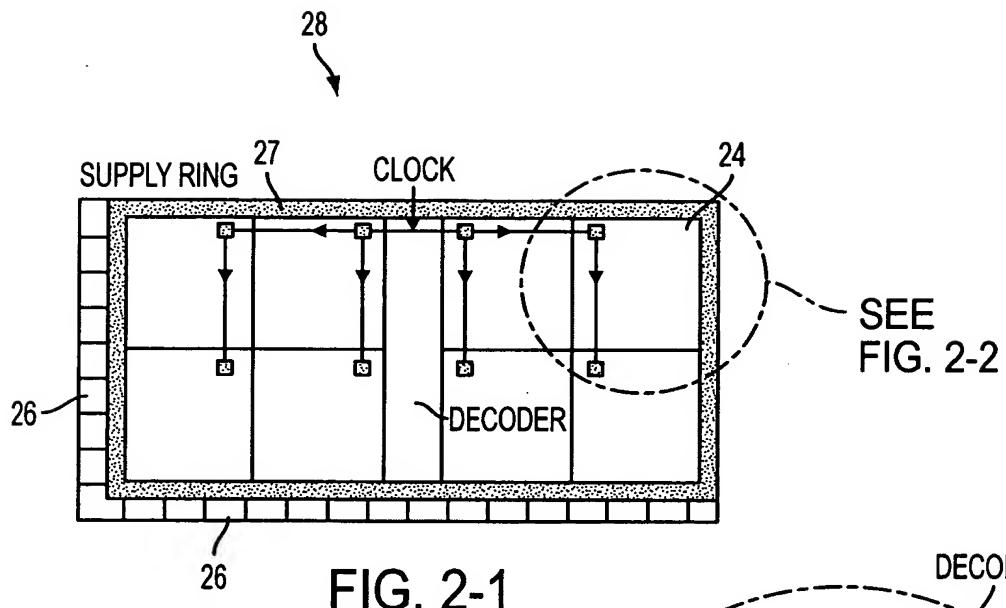


FIG. 2-2

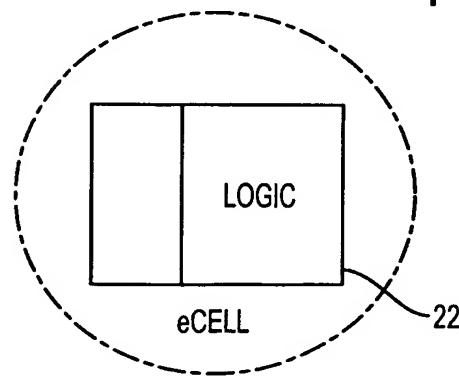


FIG. 2-3

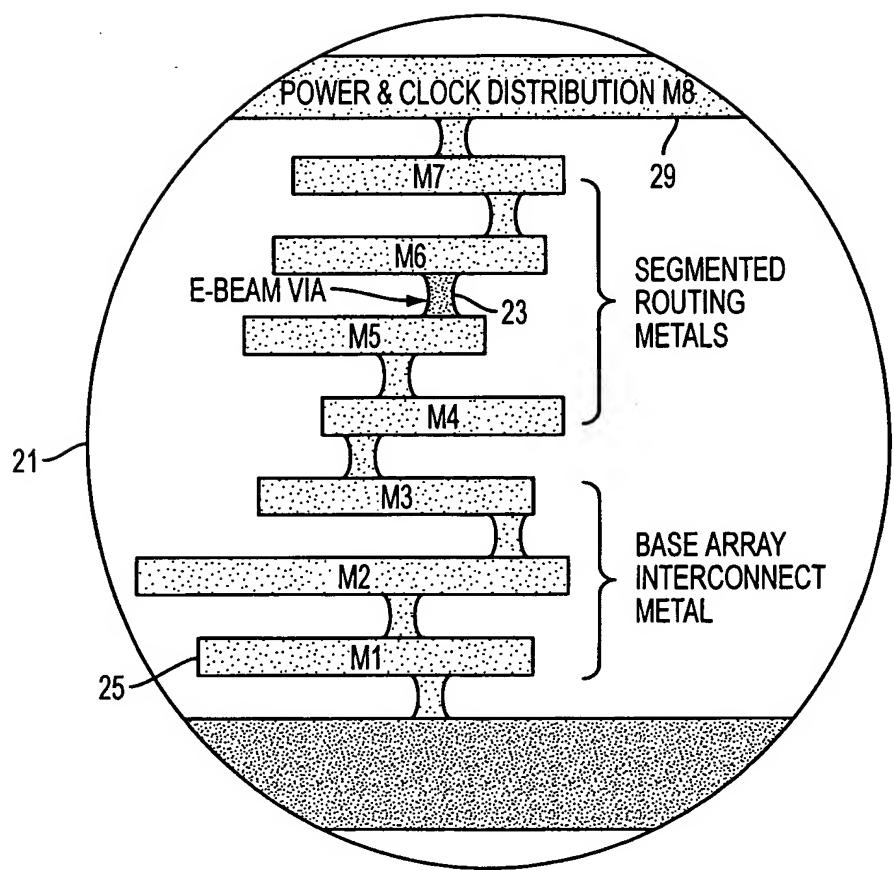


FIG. 2A

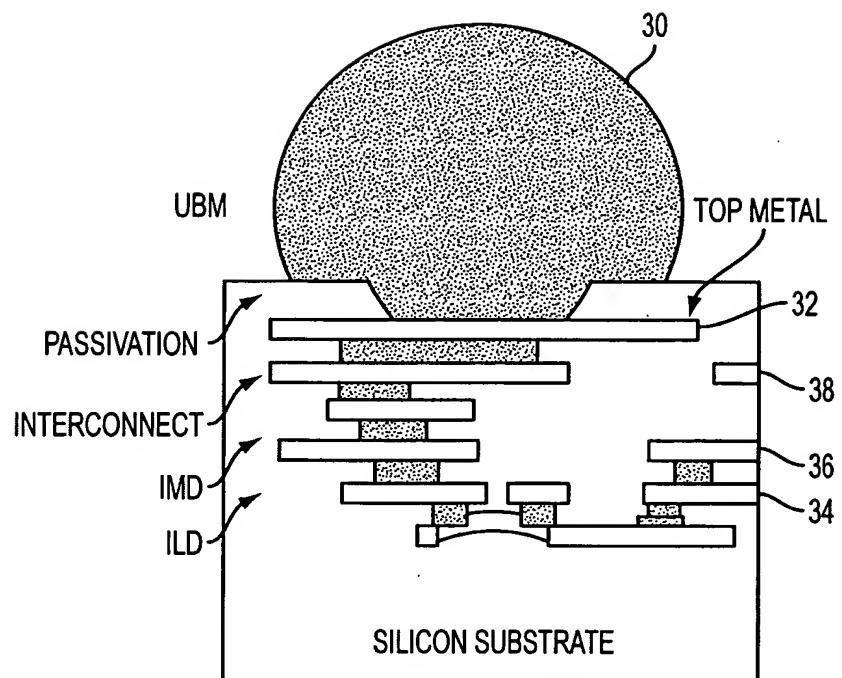


FIG. 3A

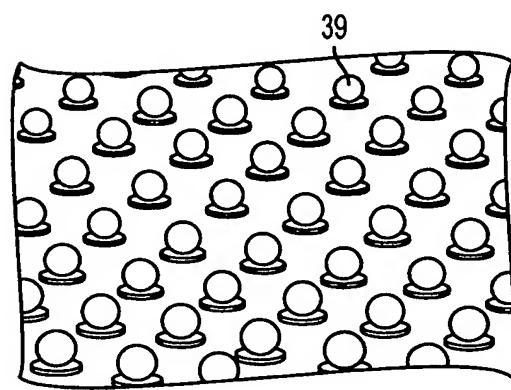


FIG. 3B

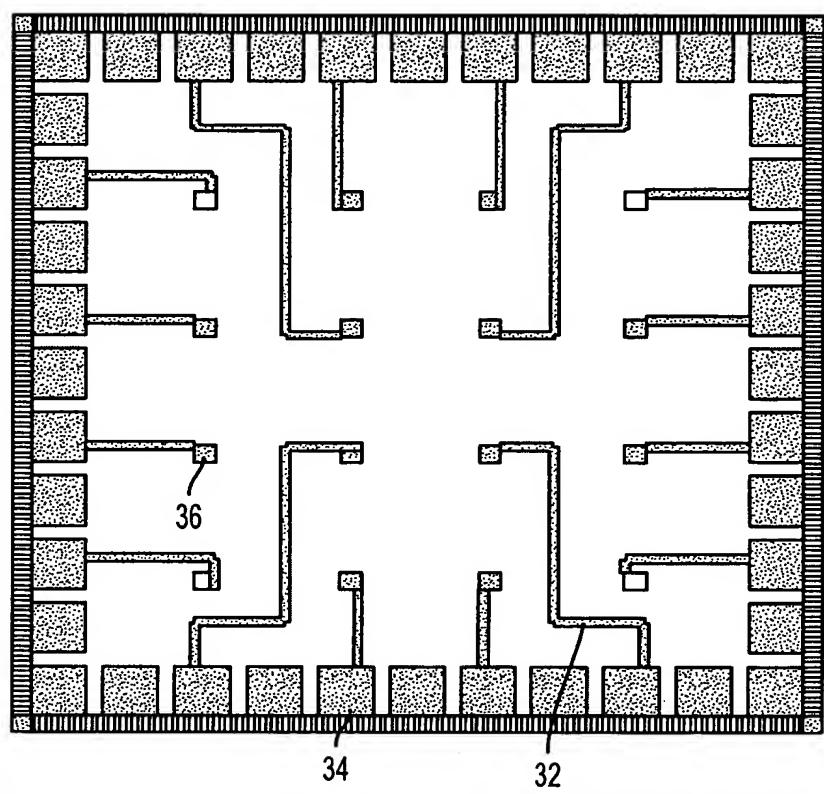


FIG. 3C

44

B	BUMP DIAMETER	150 μm \pm 10 μm (IN WAFER)	70 μm \pm 10 μm (IN WAFER)
C	Cu BUMP HEIGHT	20 μm \pm 3 μm (IN WAFER)	10 μm \pm 3 μm (IN WAFER)
D	BUMP ROOT DIAMETER	90 μm	60 μm
E	PASSIVATION HOLE SIZE	70 μm	40 μm
F	BUMP PITCH	200 μm	120 μm

42

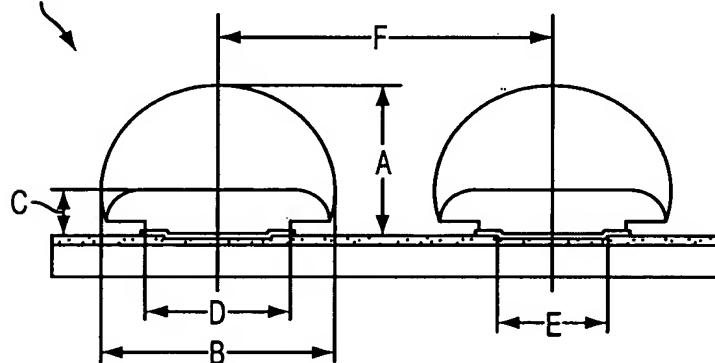


FIG. 4

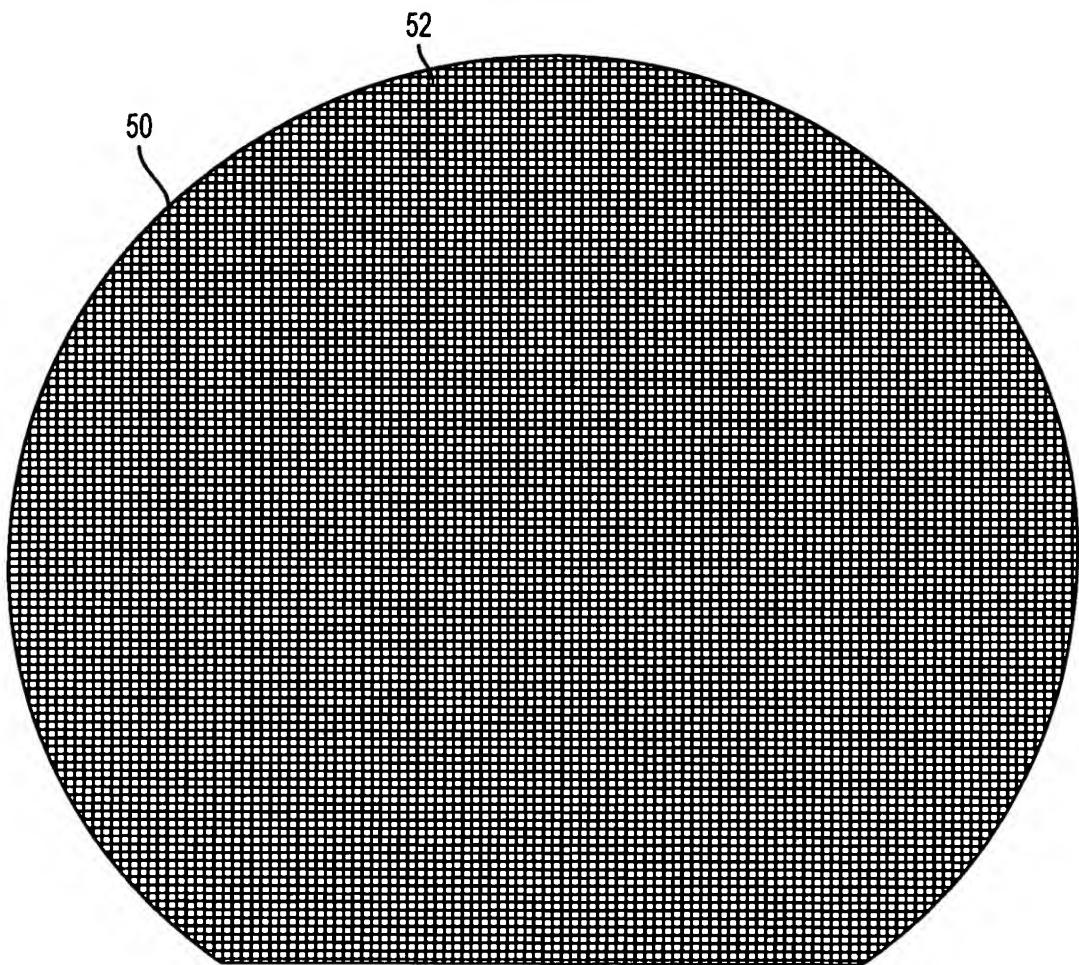


FIG. 5

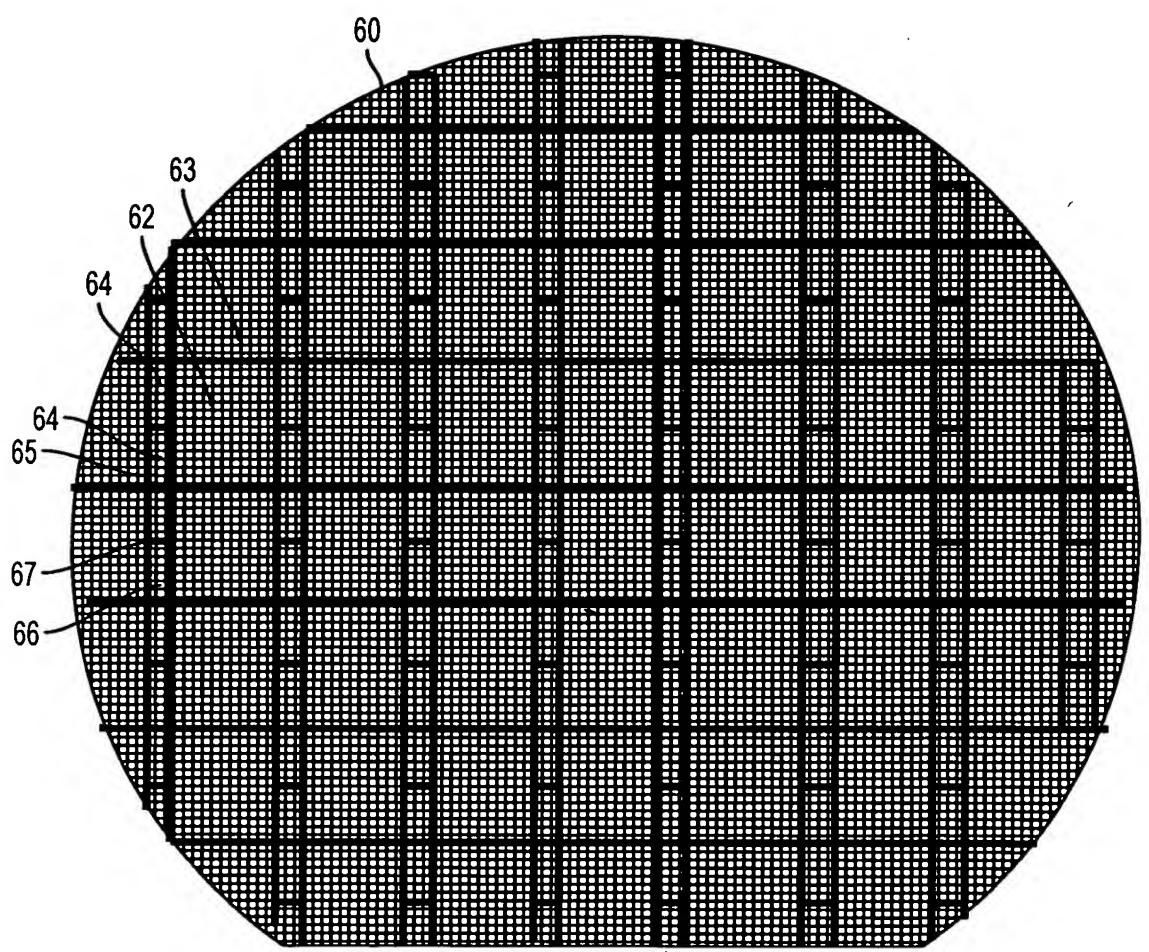


FIG. 6

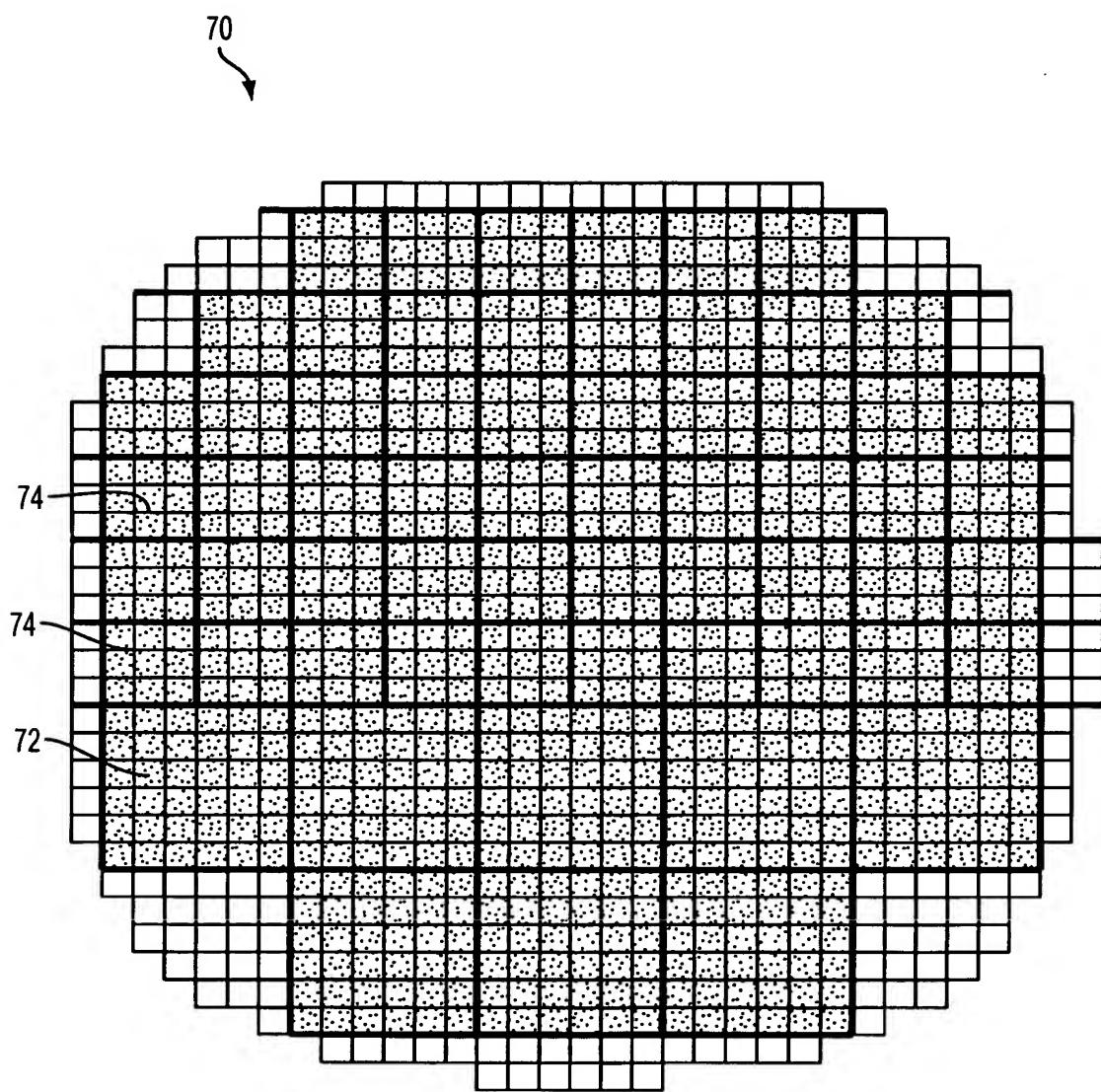


FIG. 7

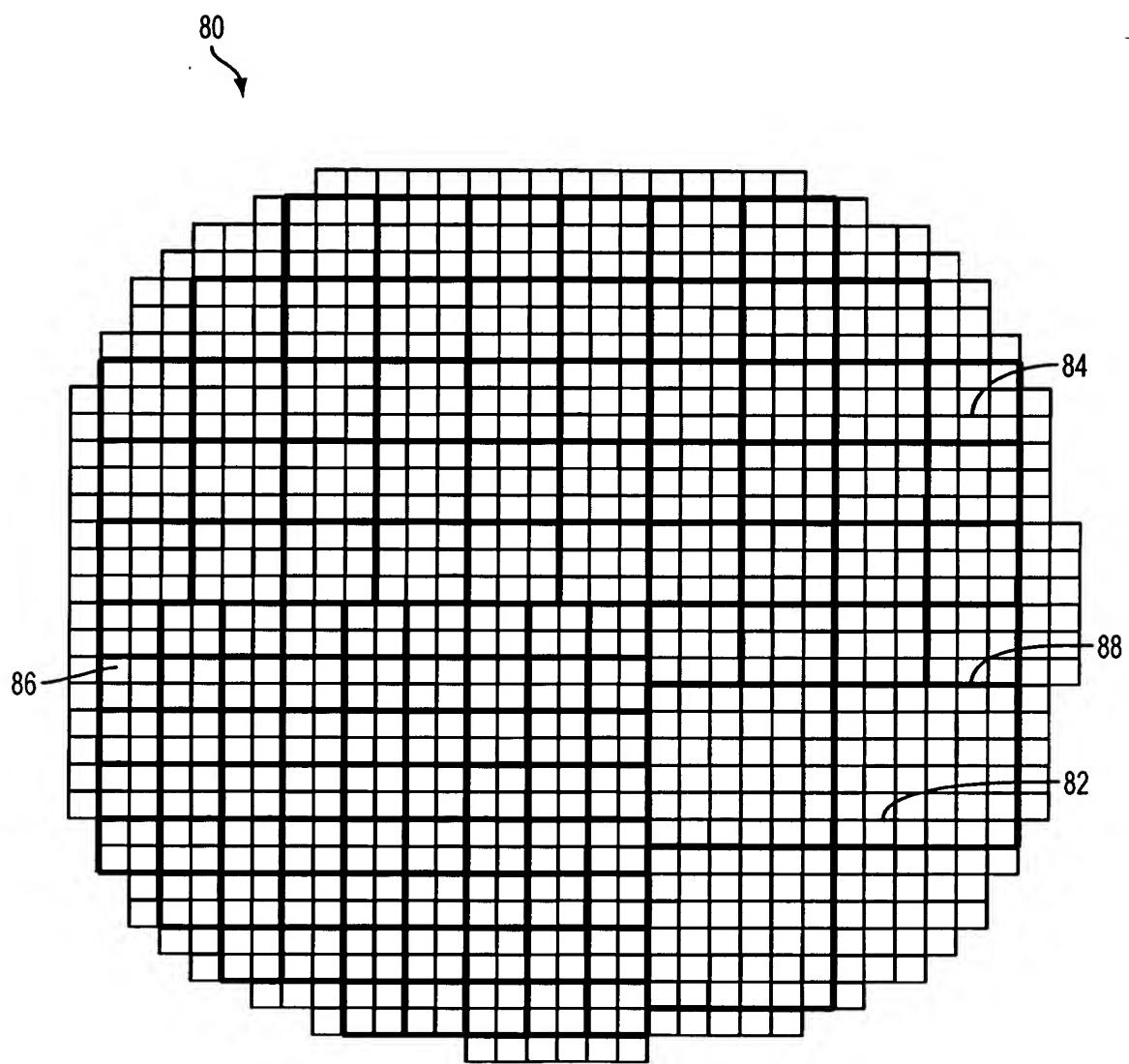
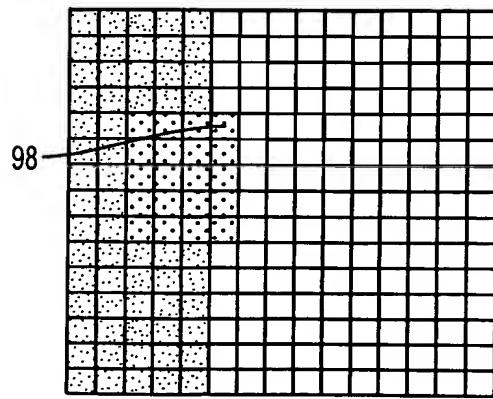
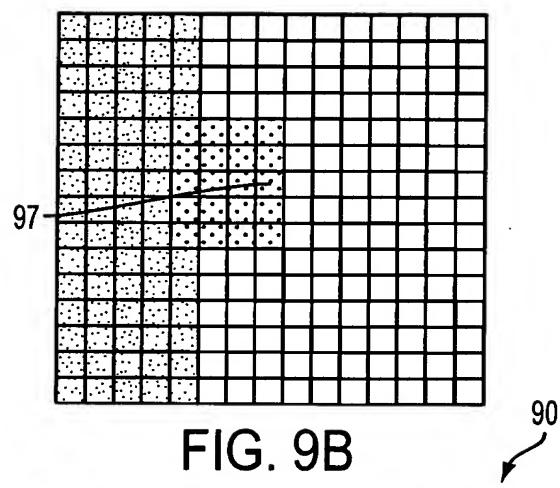
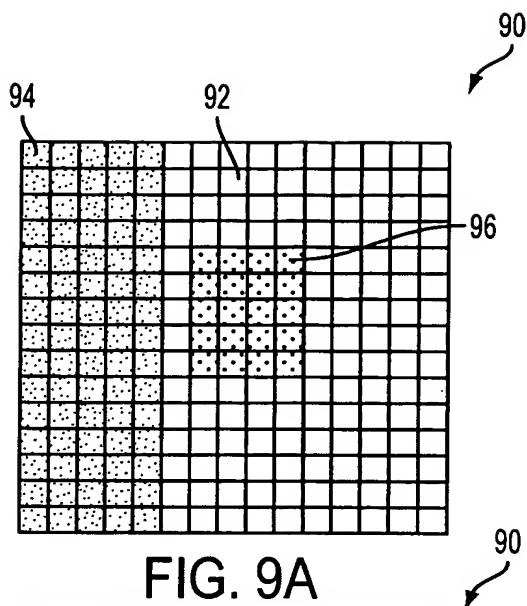


FIG. 8



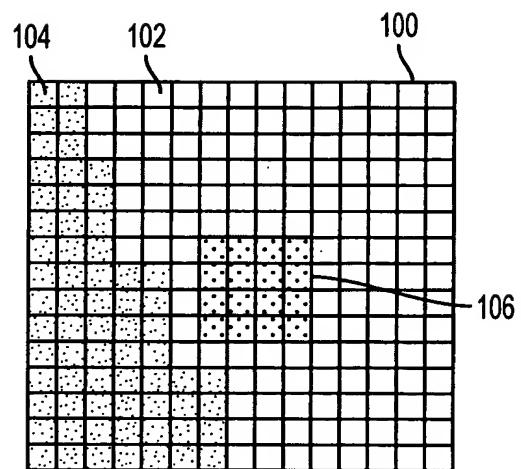


FIG. 10A

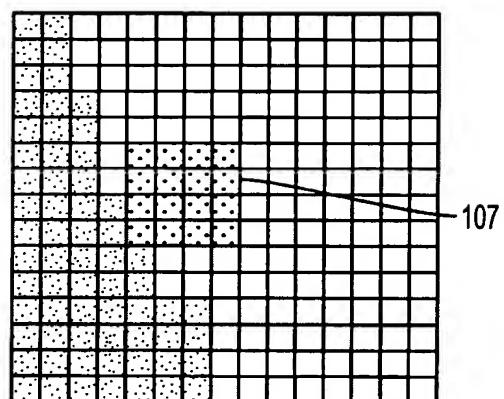


FIG. 10B

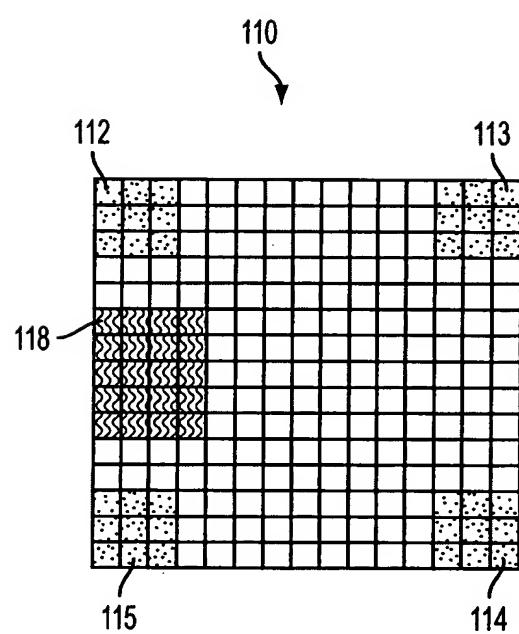


FIG. 11

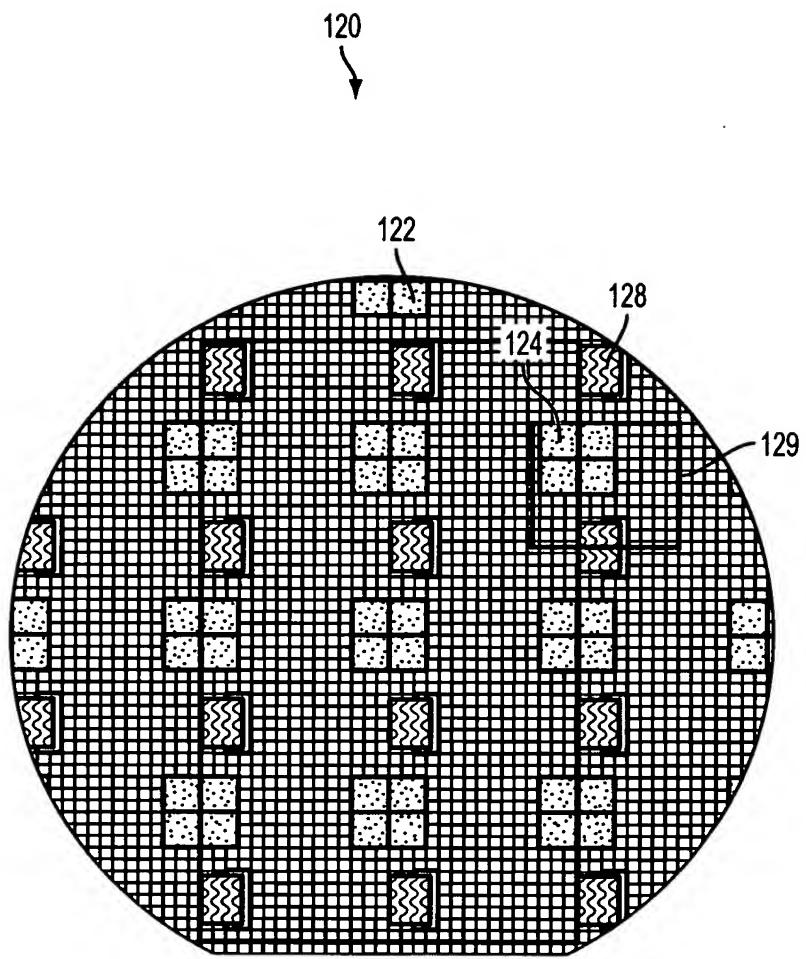


FIG. 12

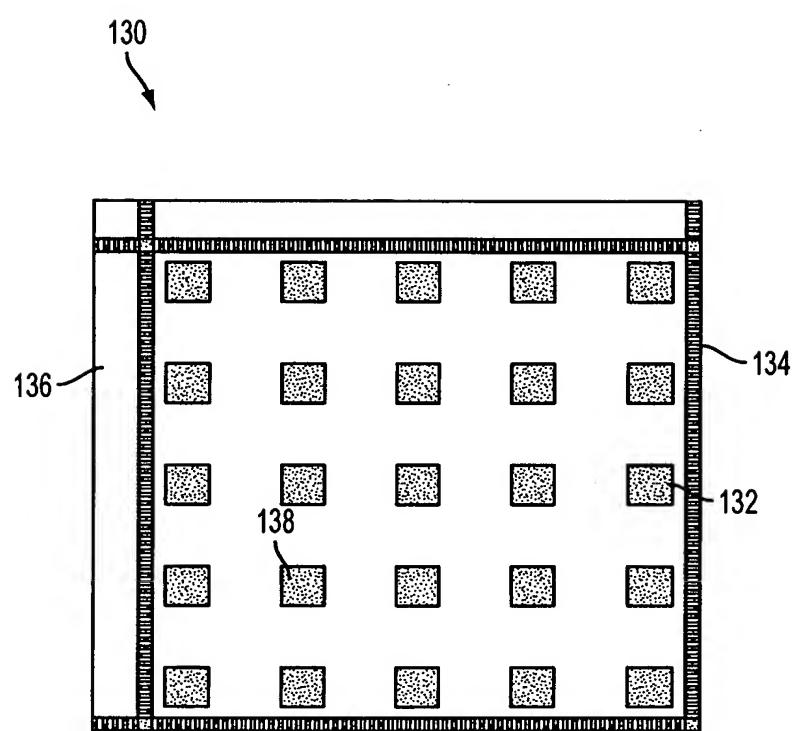


FIG. 13

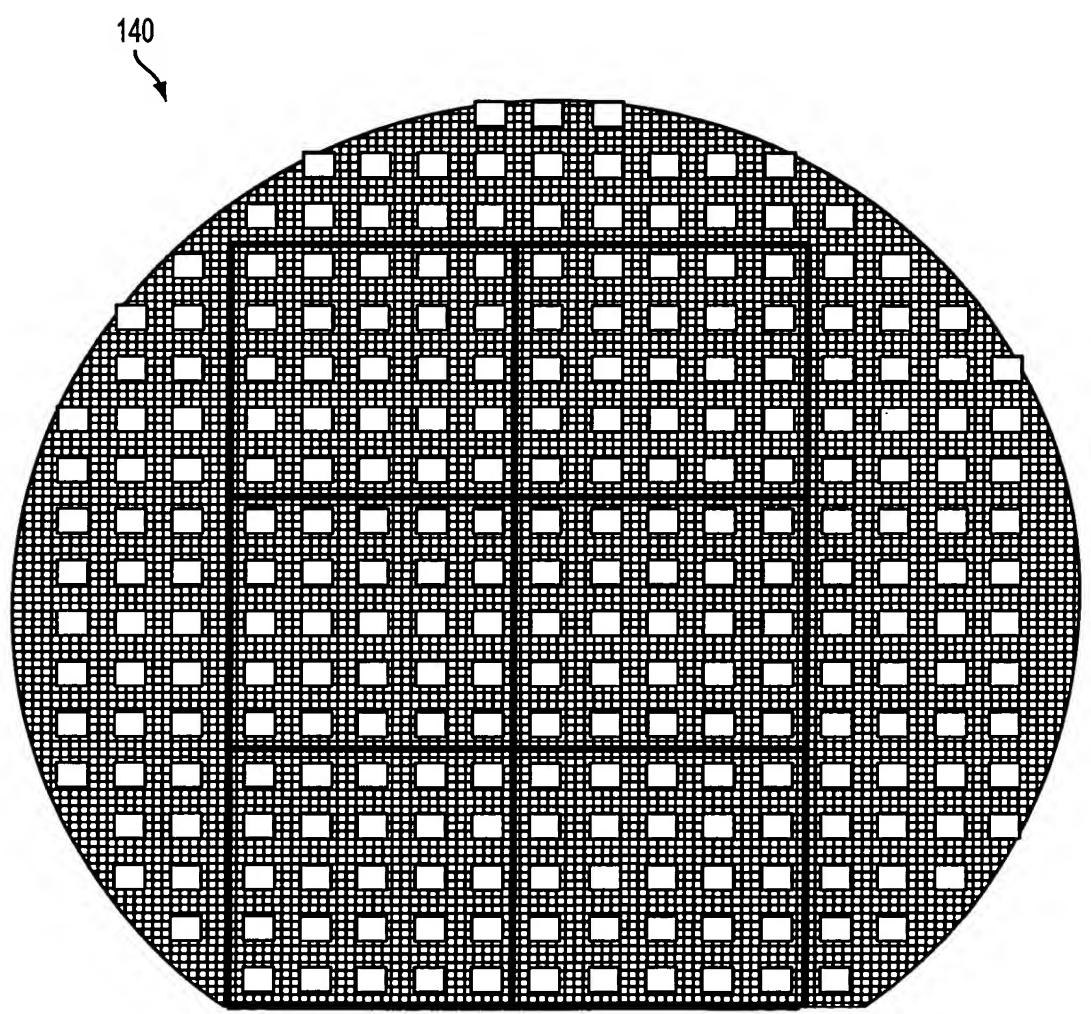


FIG. 14

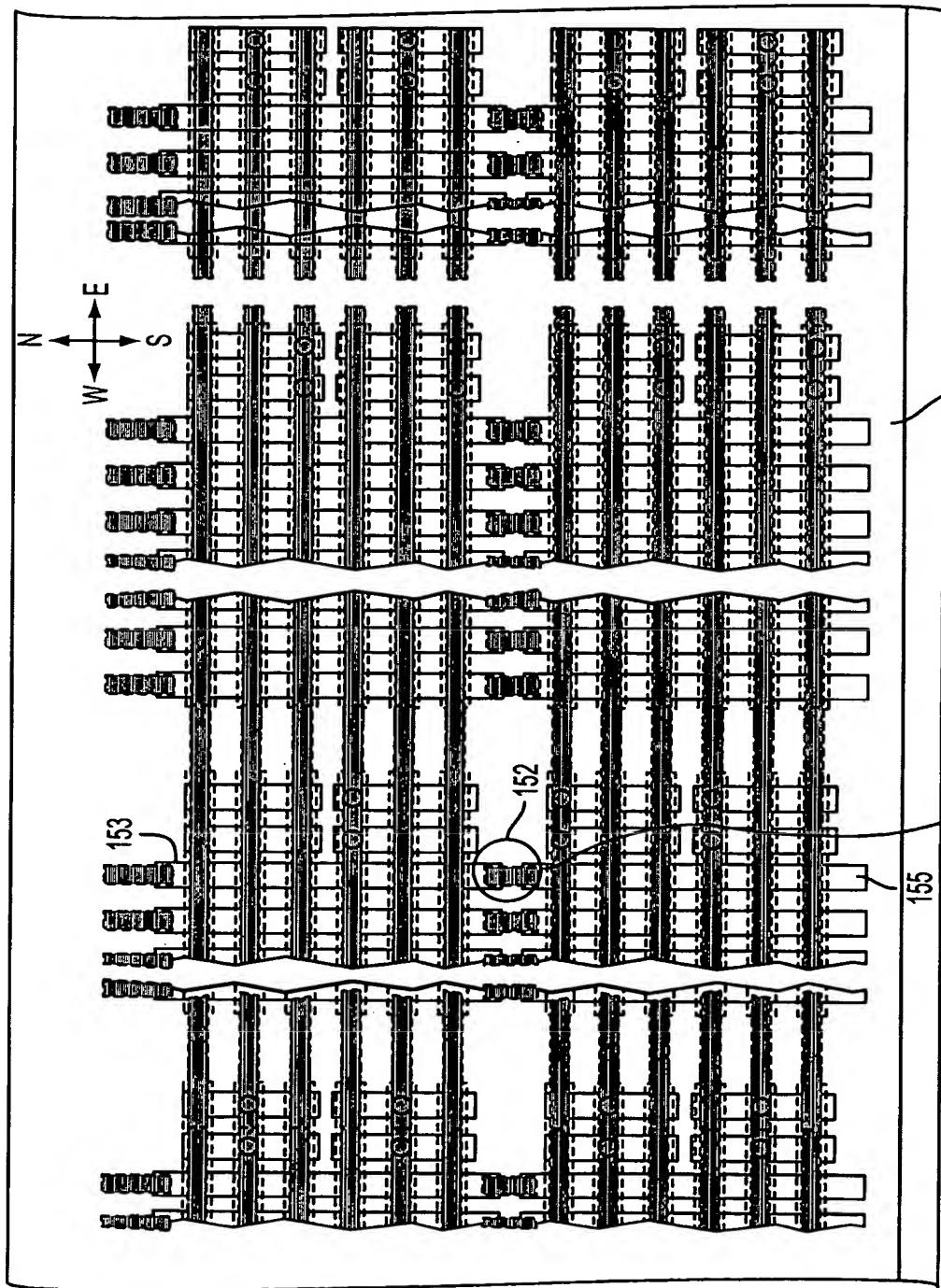


FIG. 15



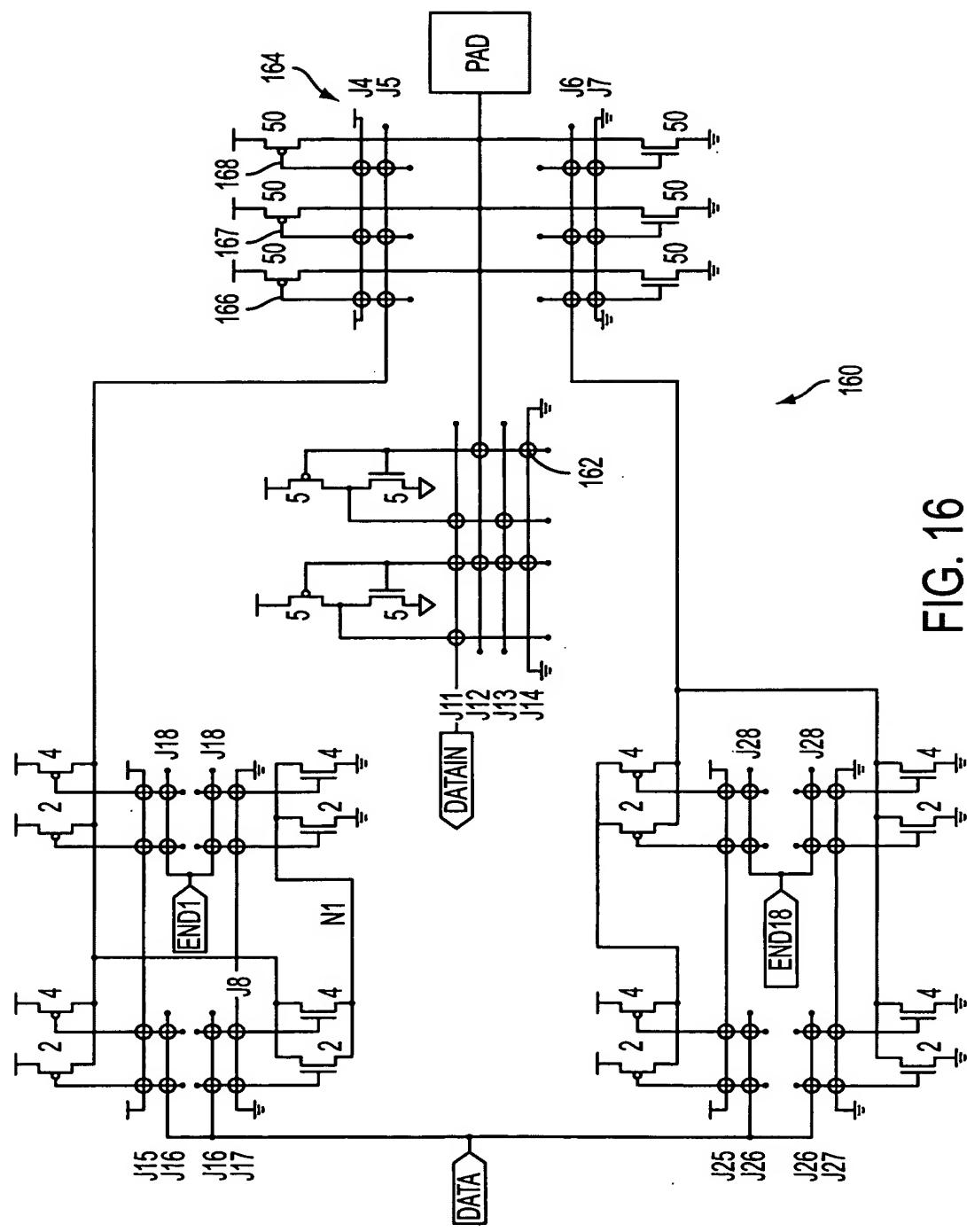


FIG. 16

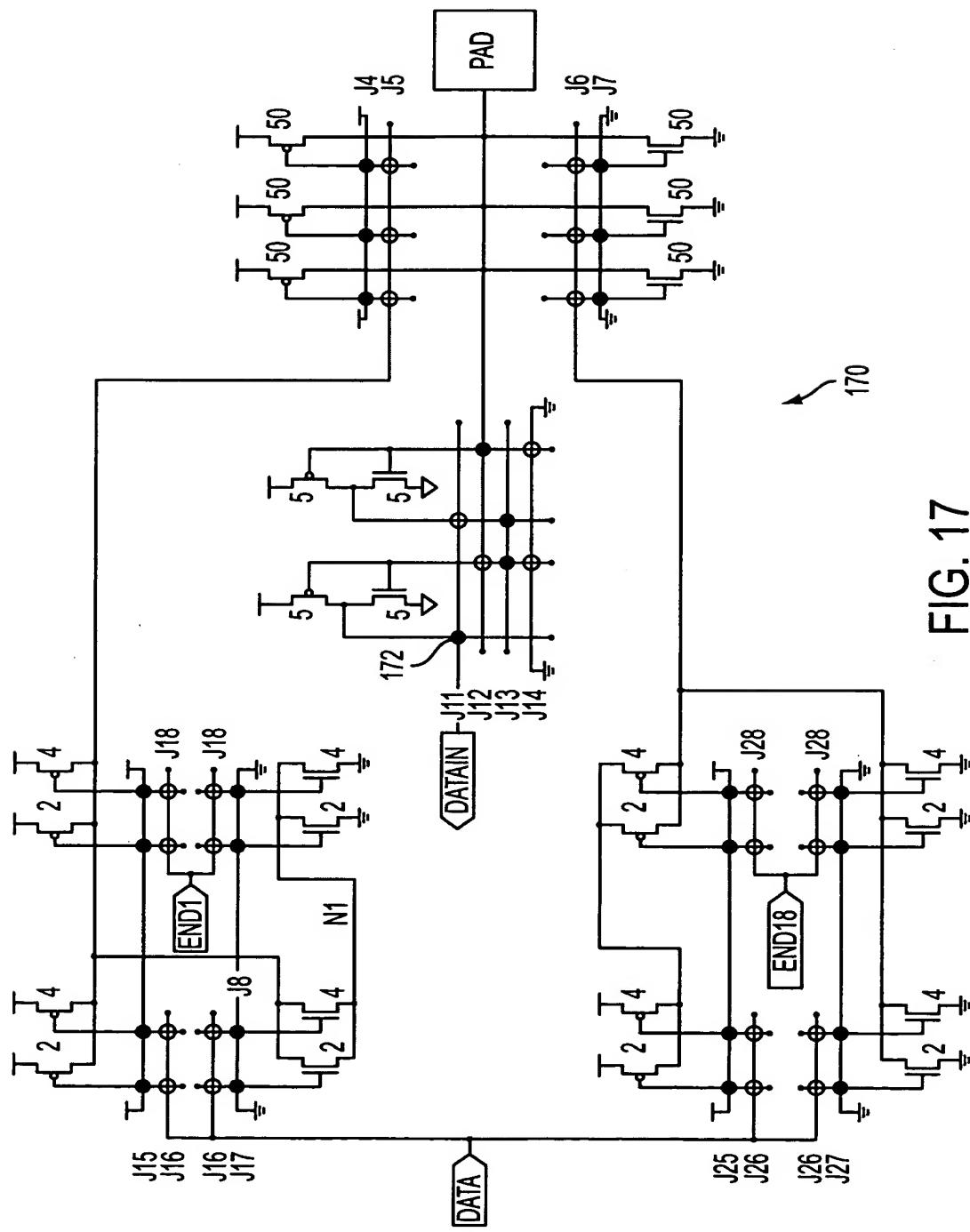


FIG. 17

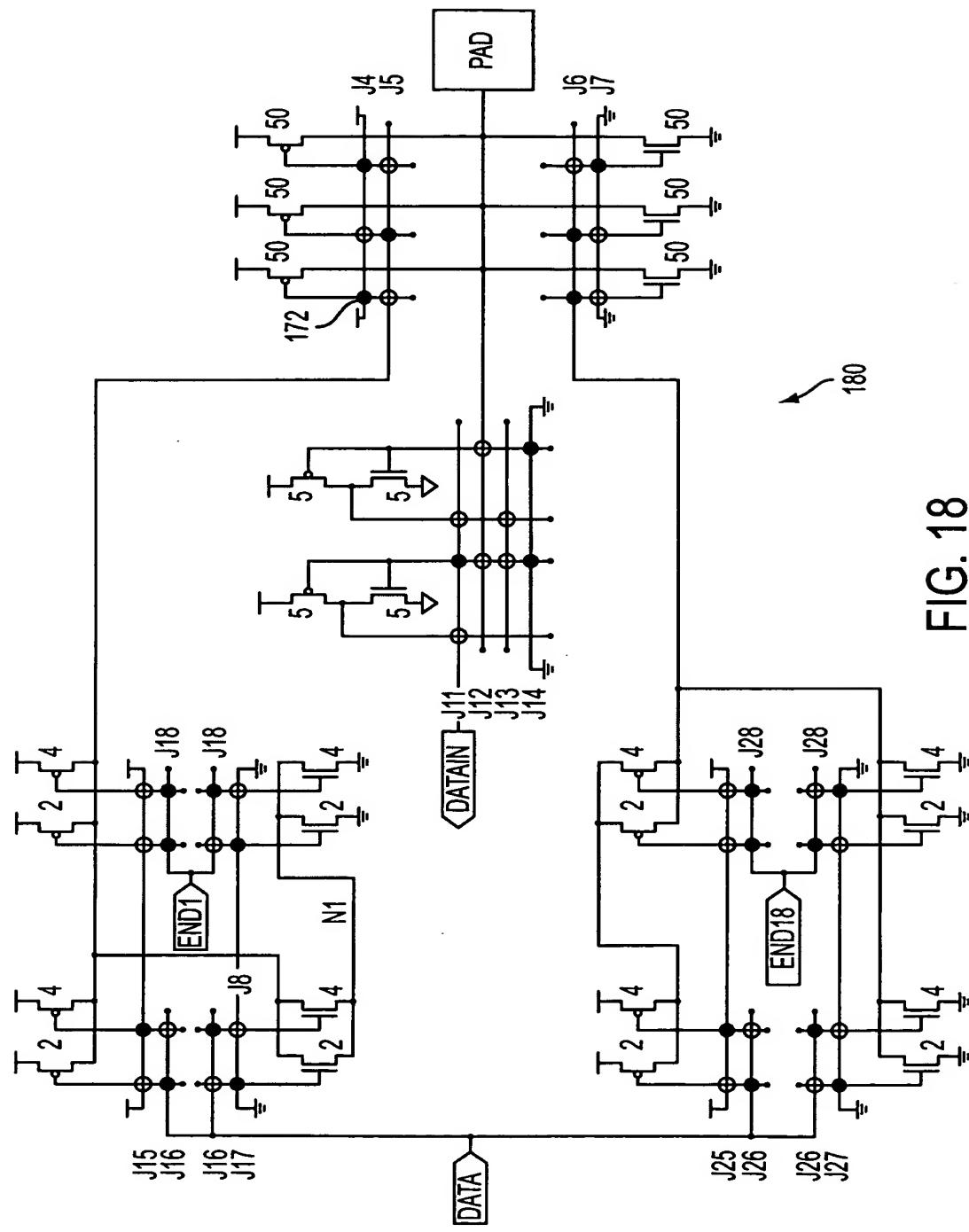


FIG. 18

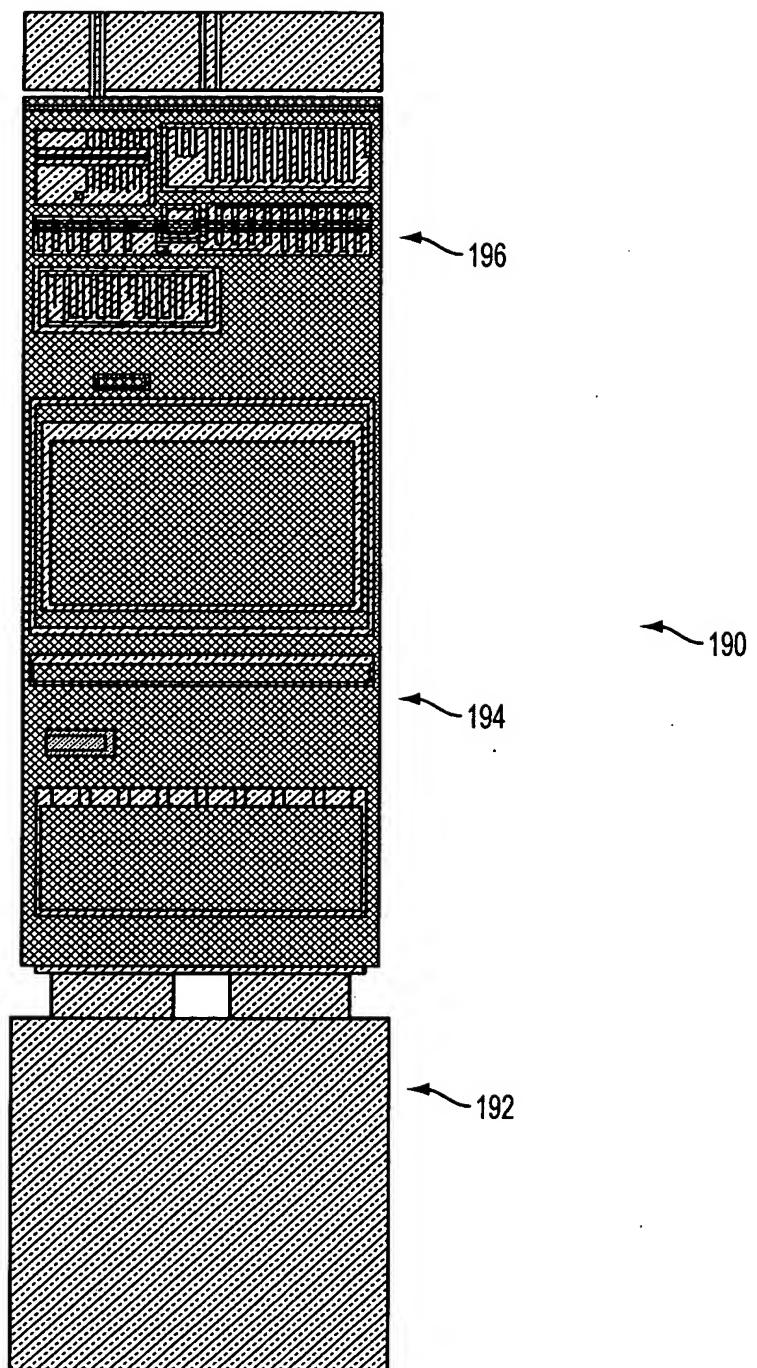
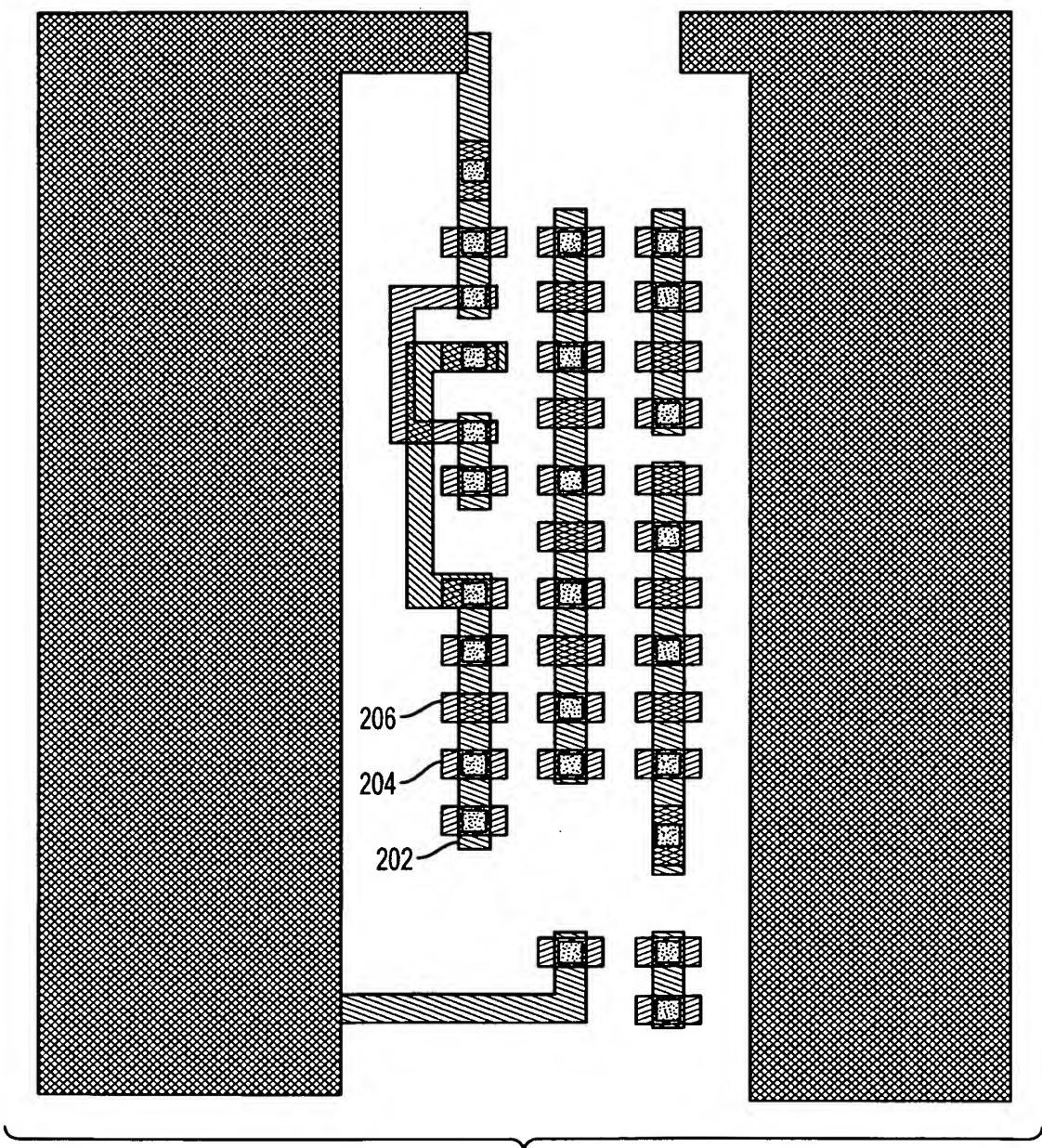


FIG. 19



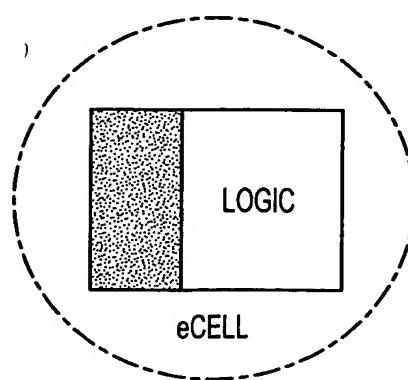
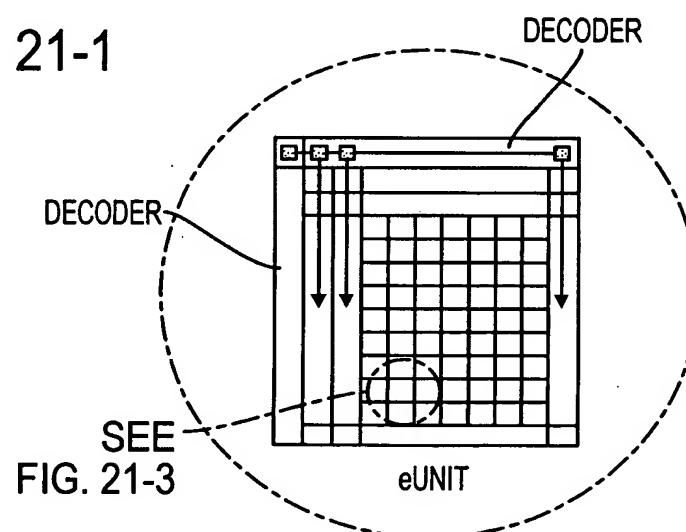
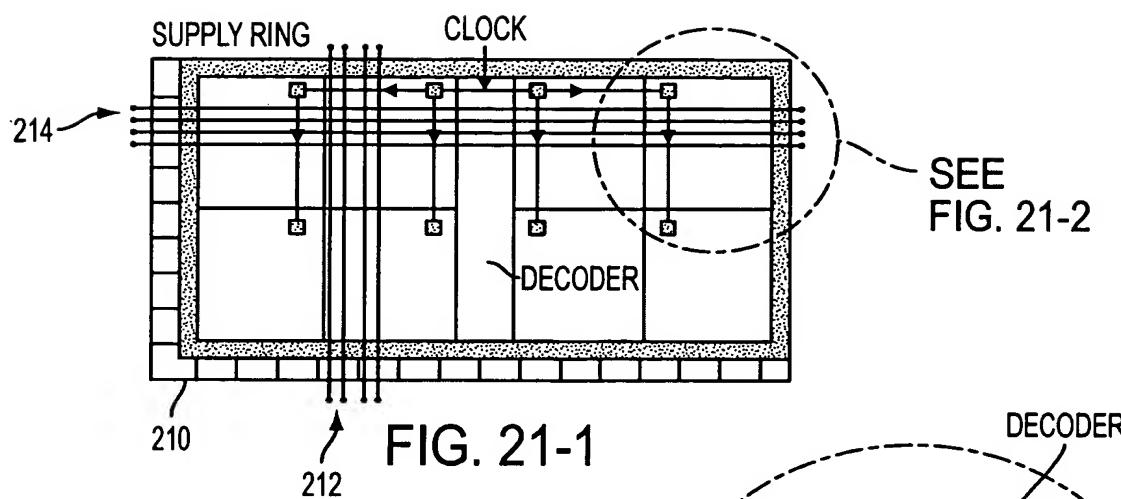


FIG. 21-3

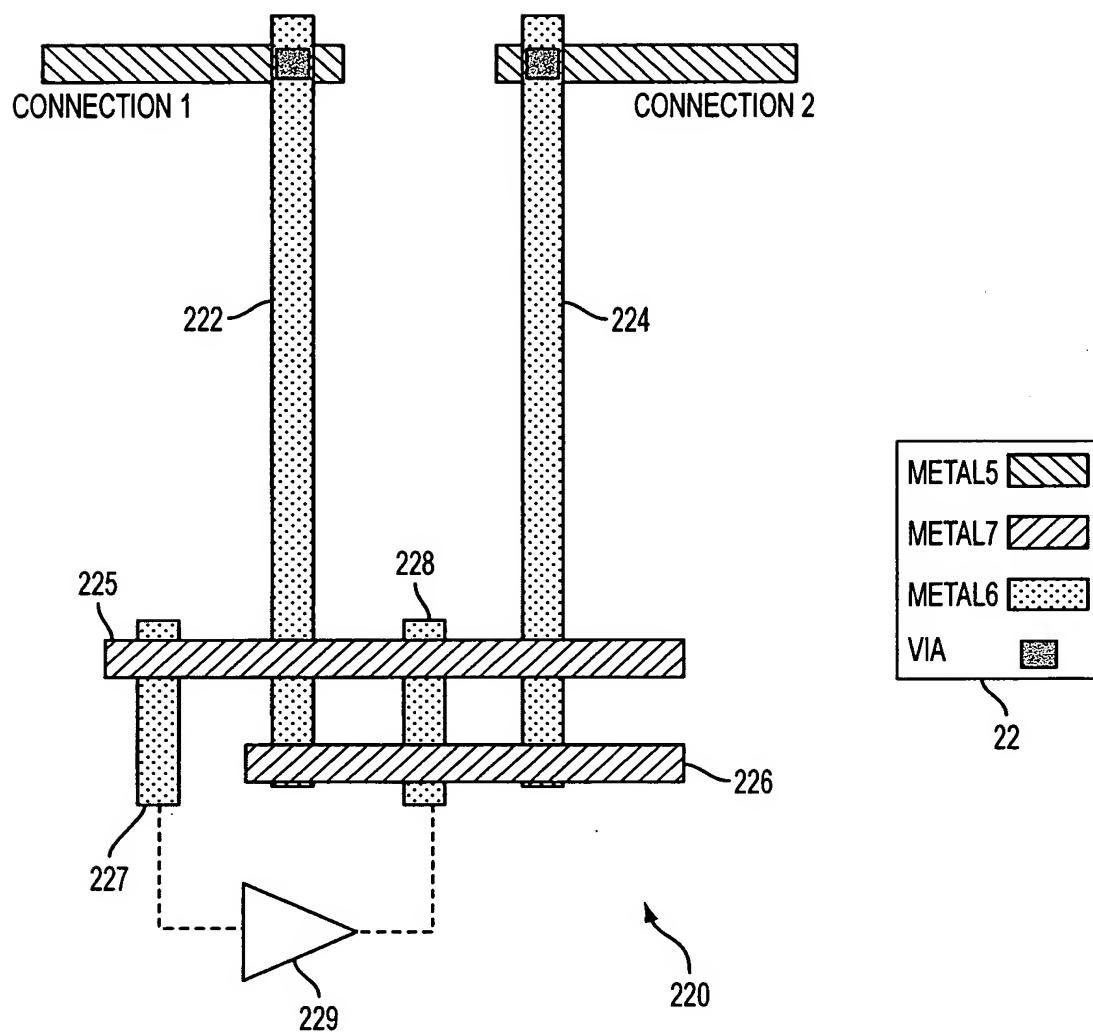


FIG. 22

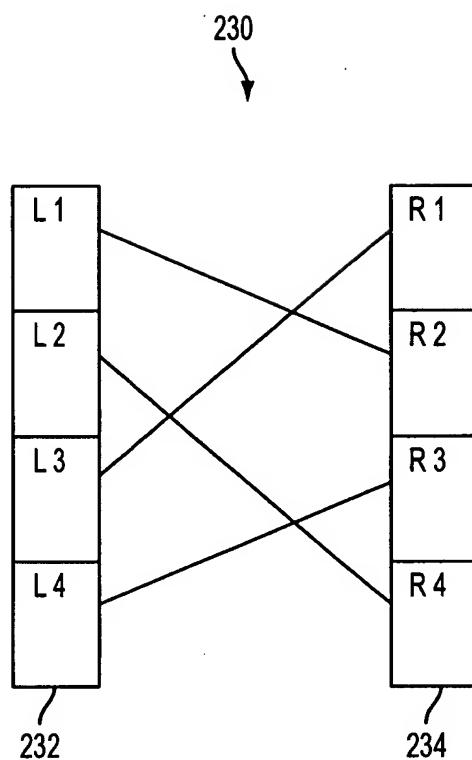


FIG. 23

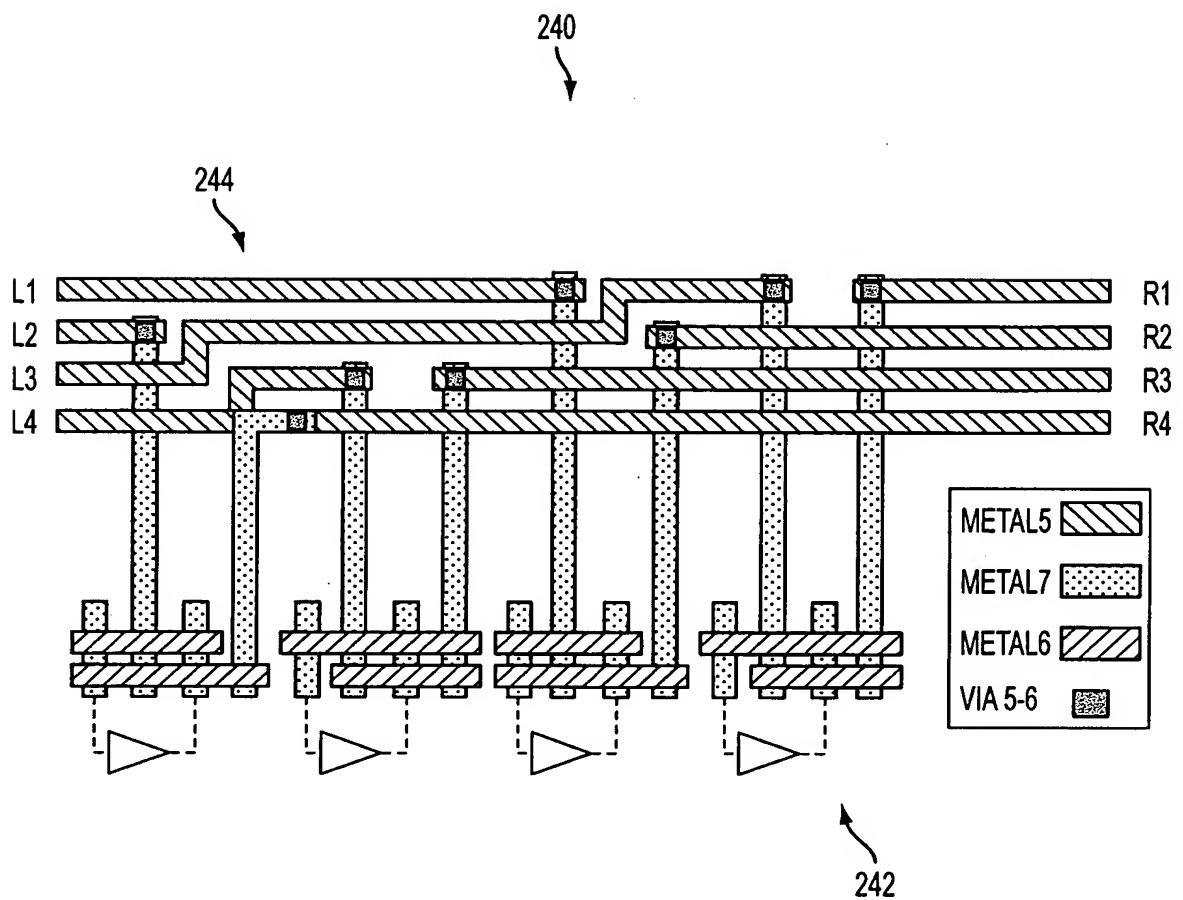


FIG. 24

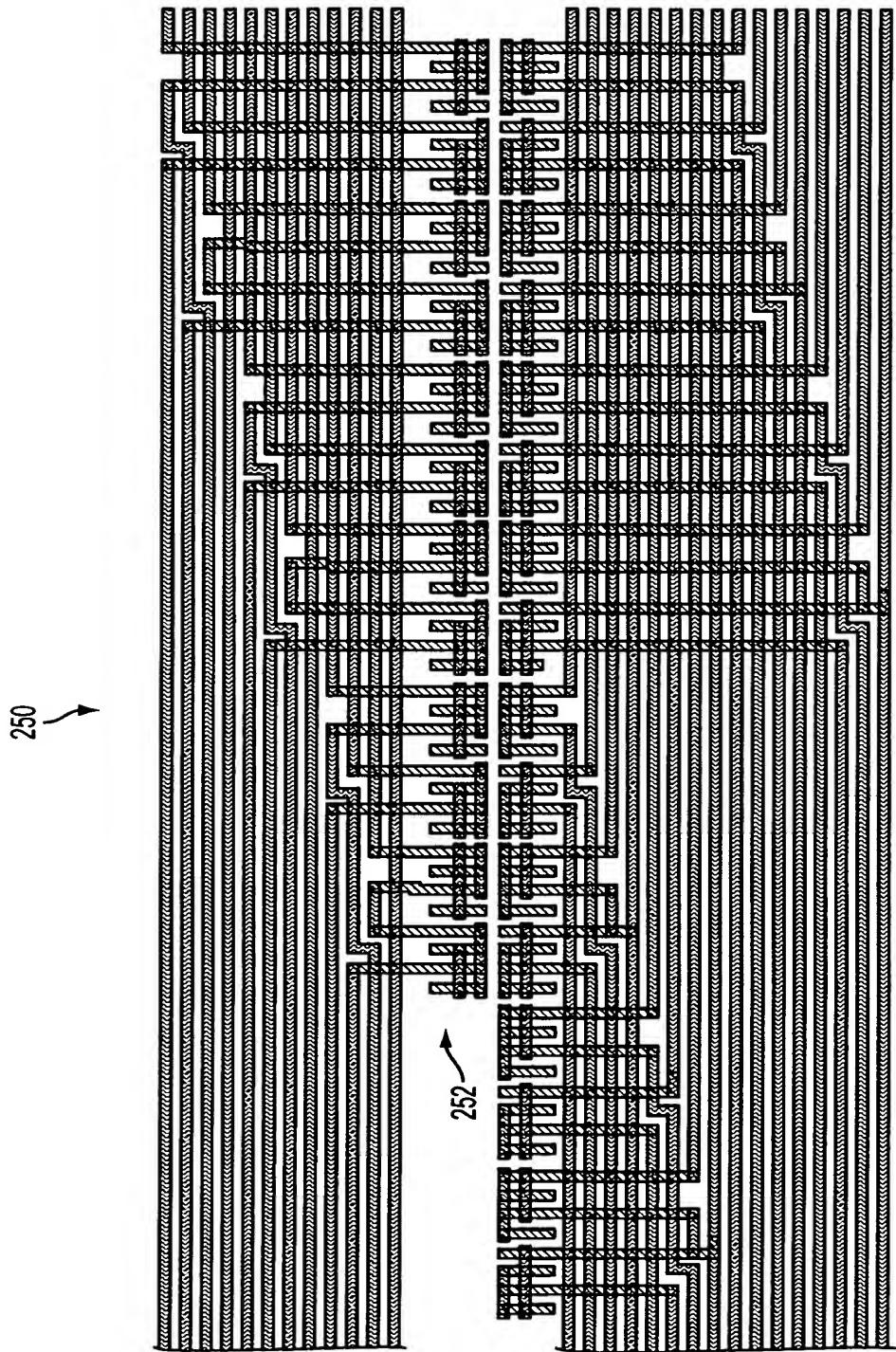


FIG. 25

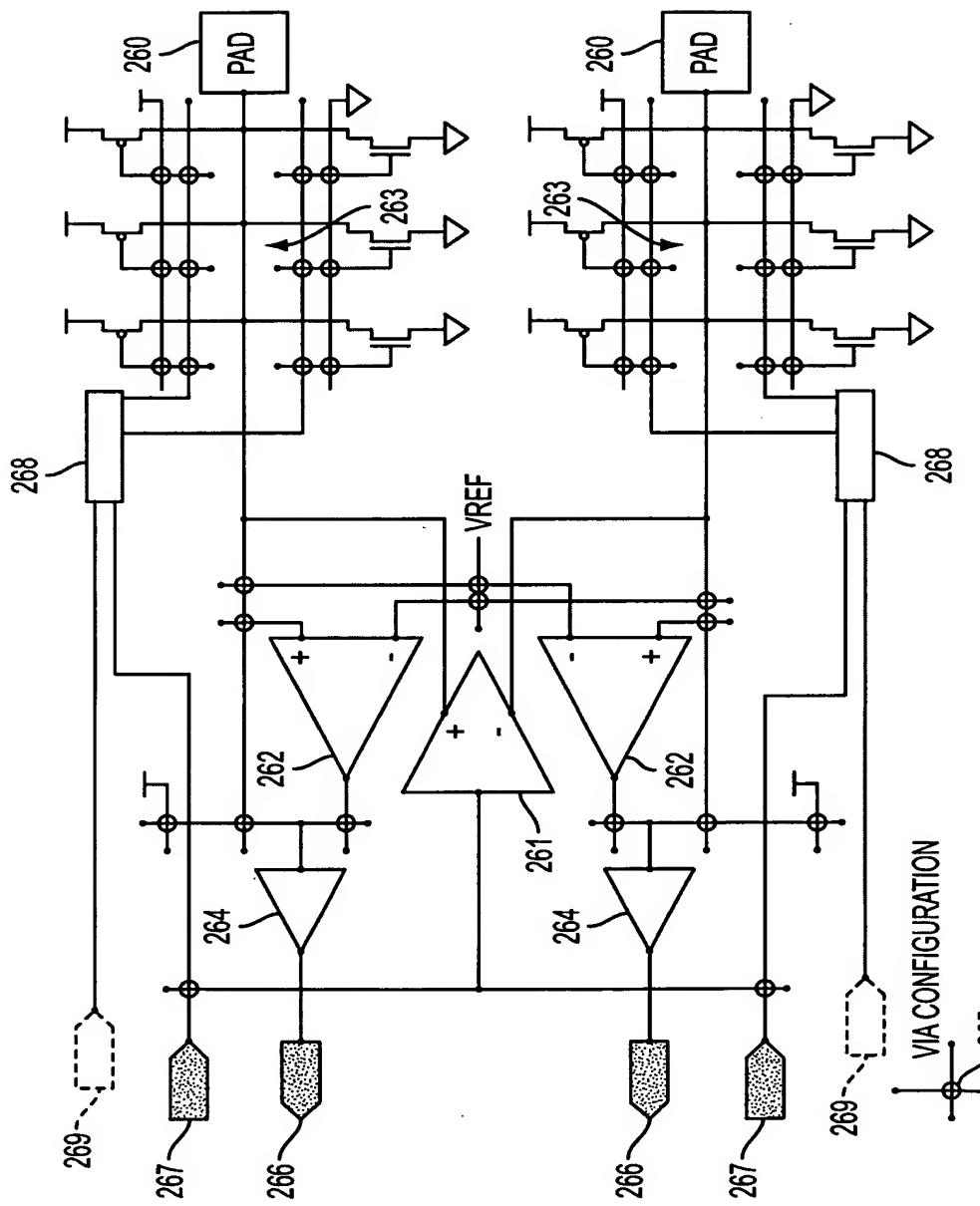


FIG. 26

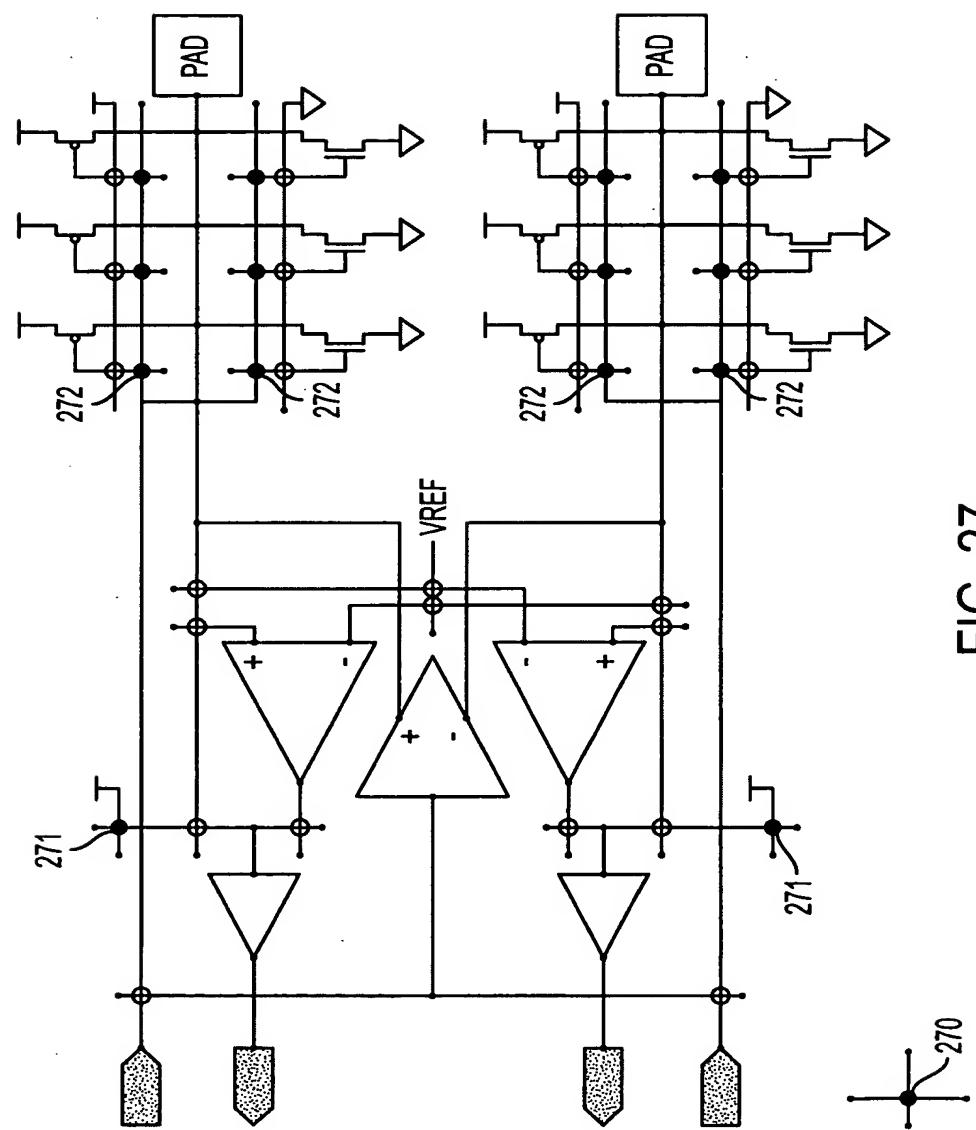


FIG. 27

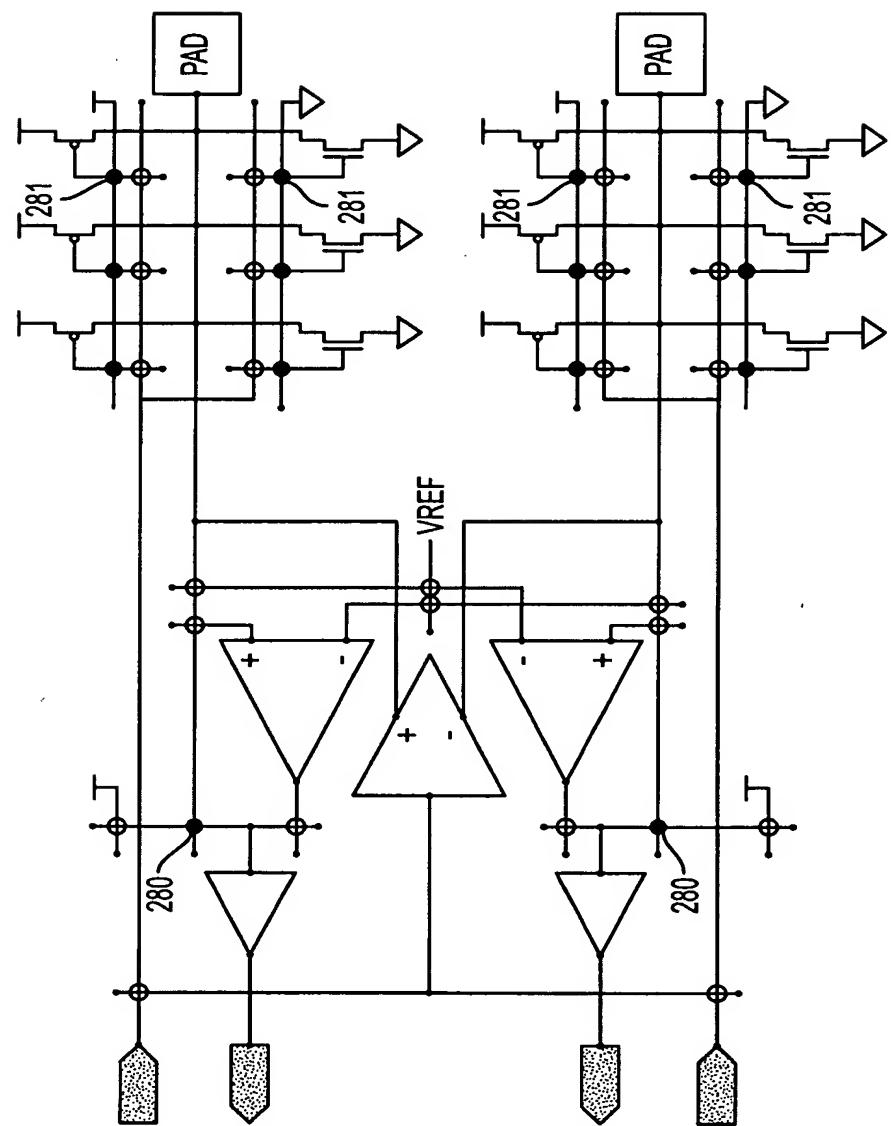


FIG. 28

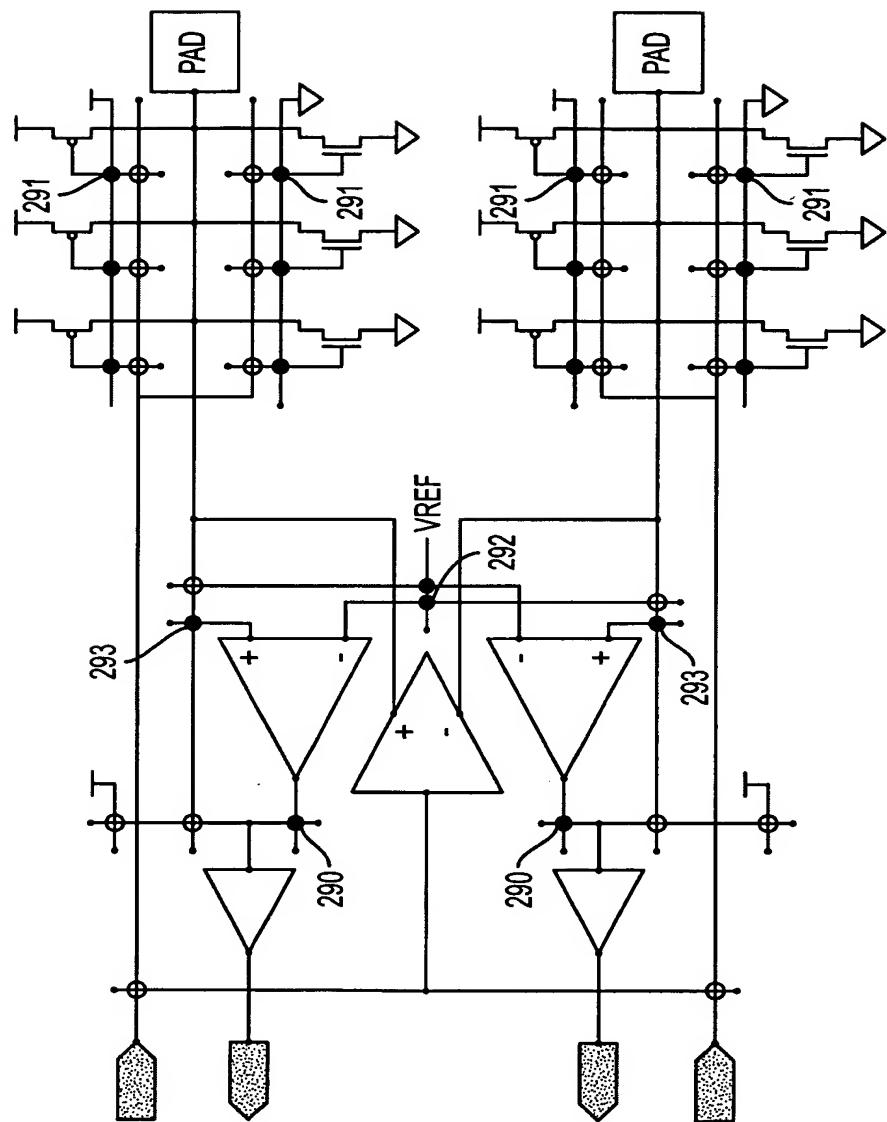


FIG. 29

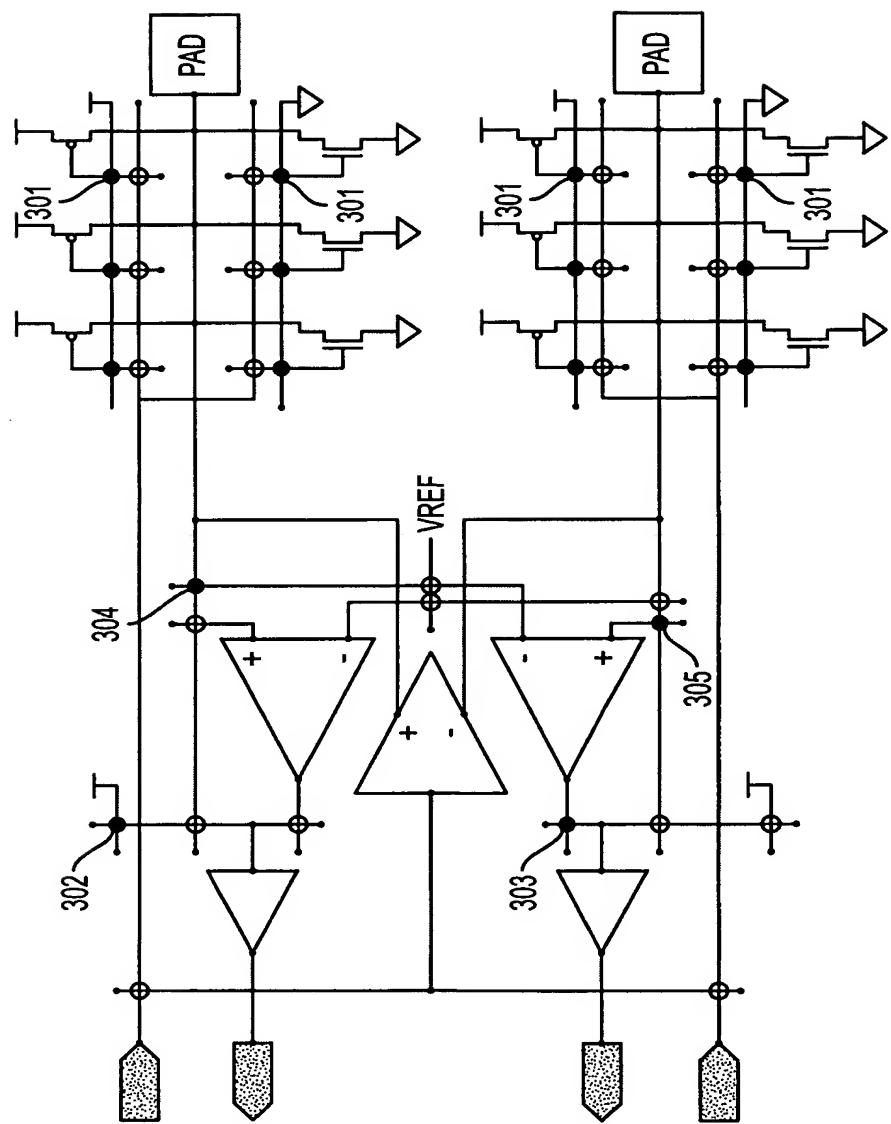


FIG. 30

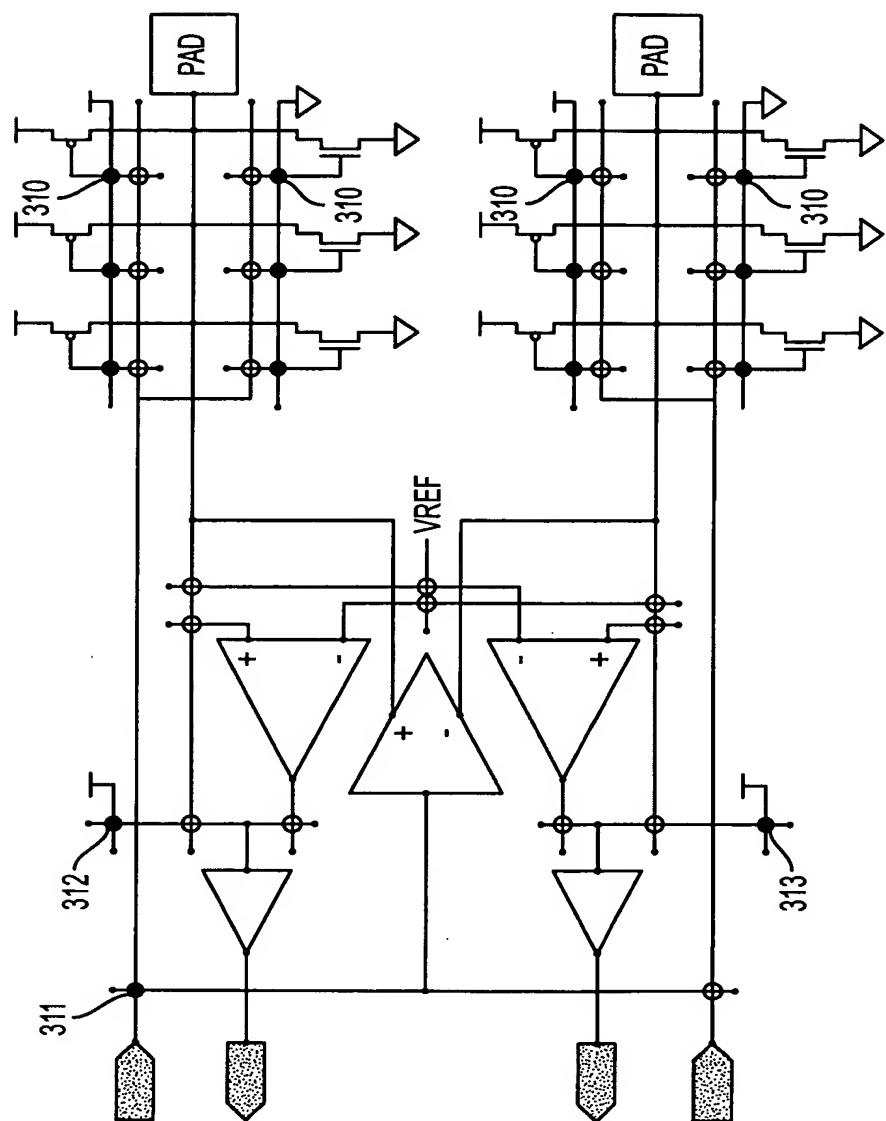


FIG. 31

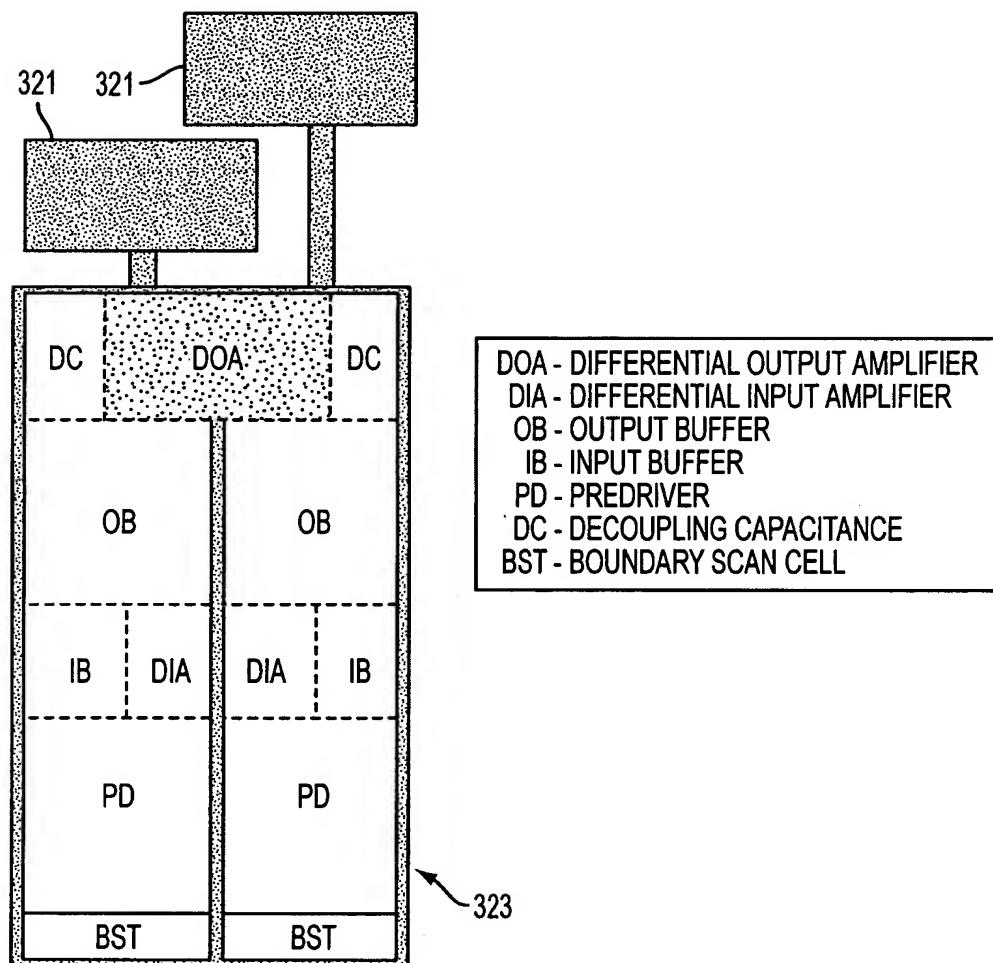


FIG. 32

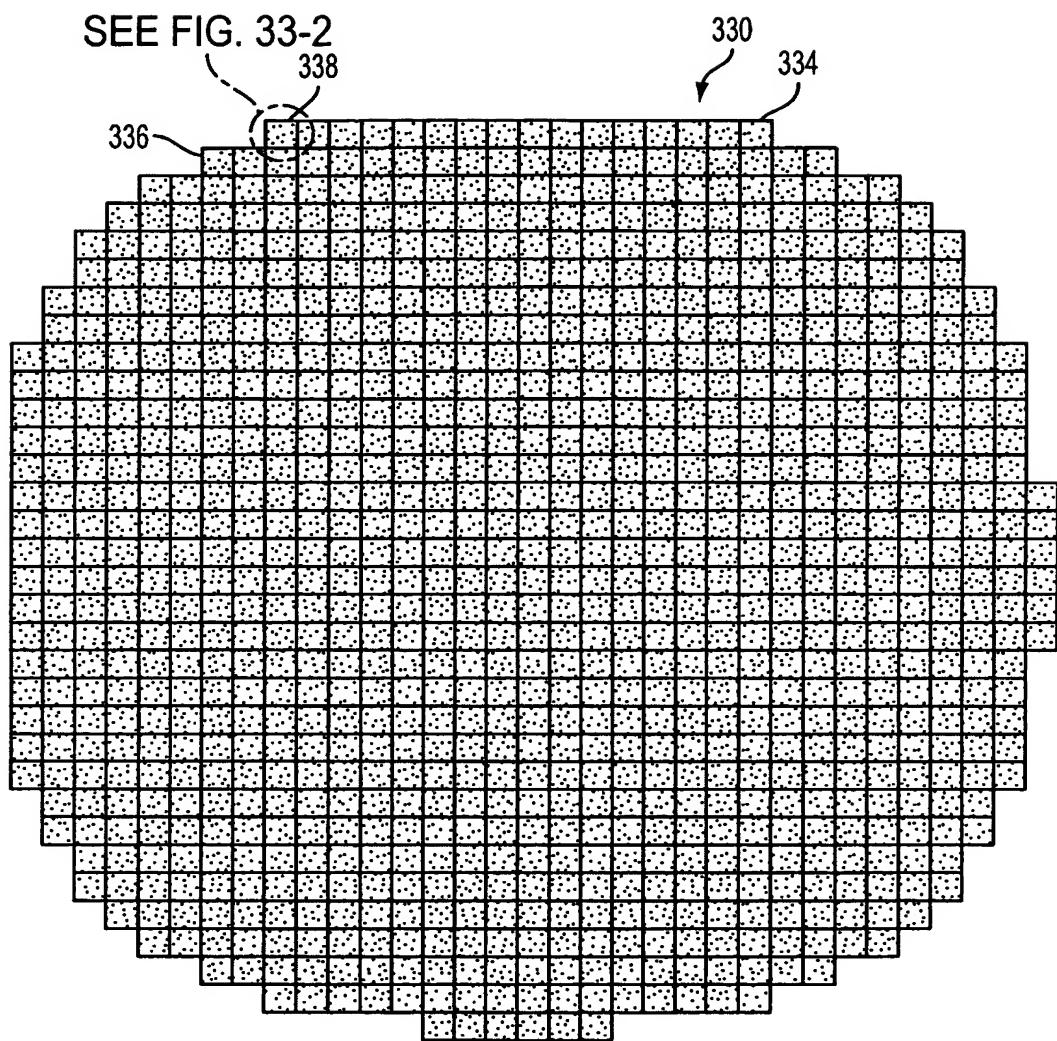


FIG. 33-1

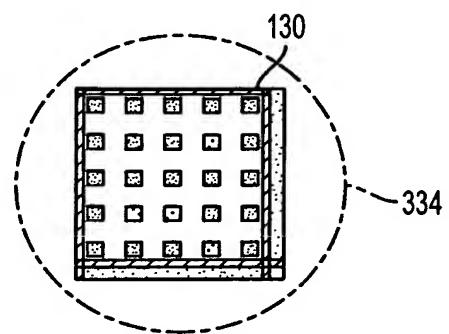


FIG. 33-2

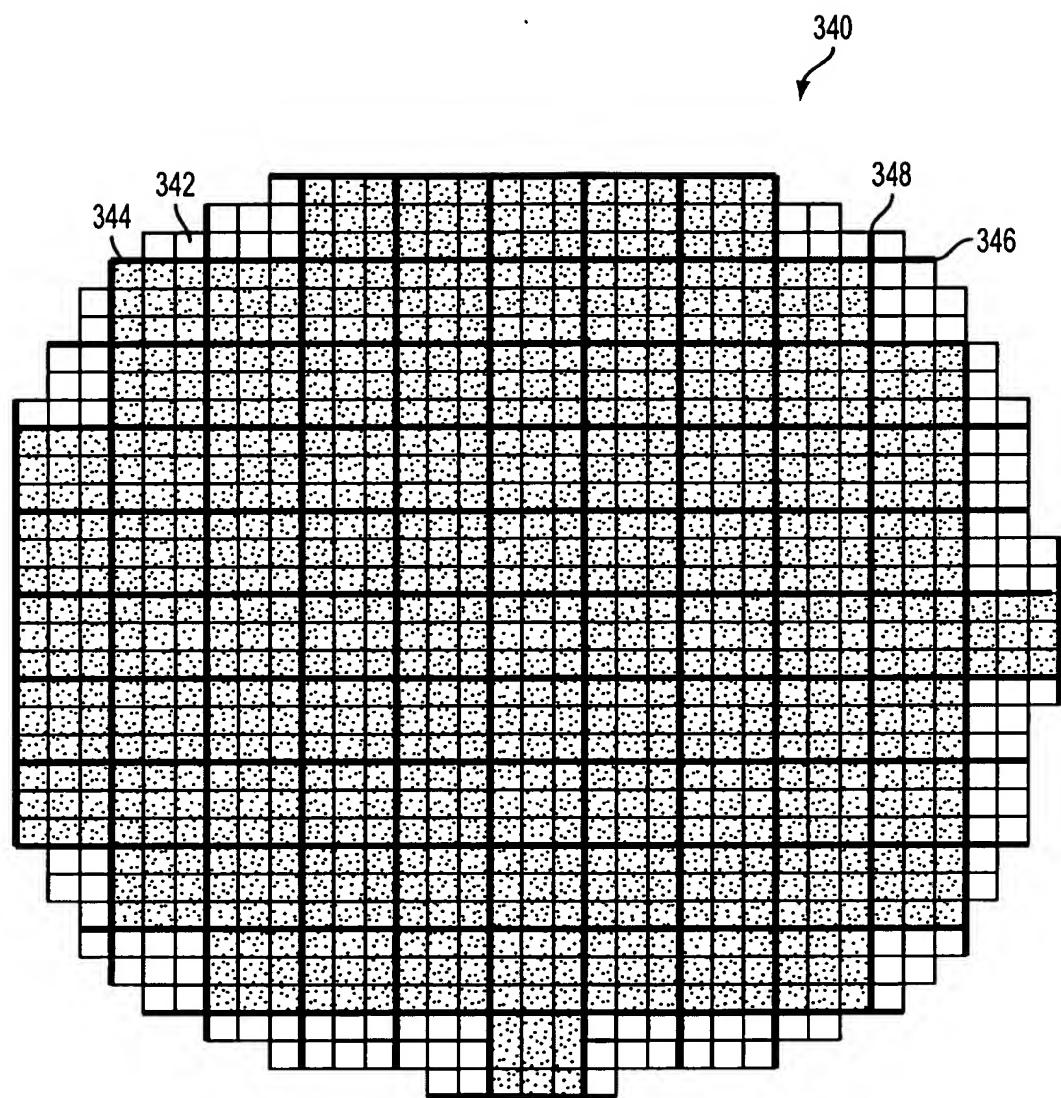


FIG. 34

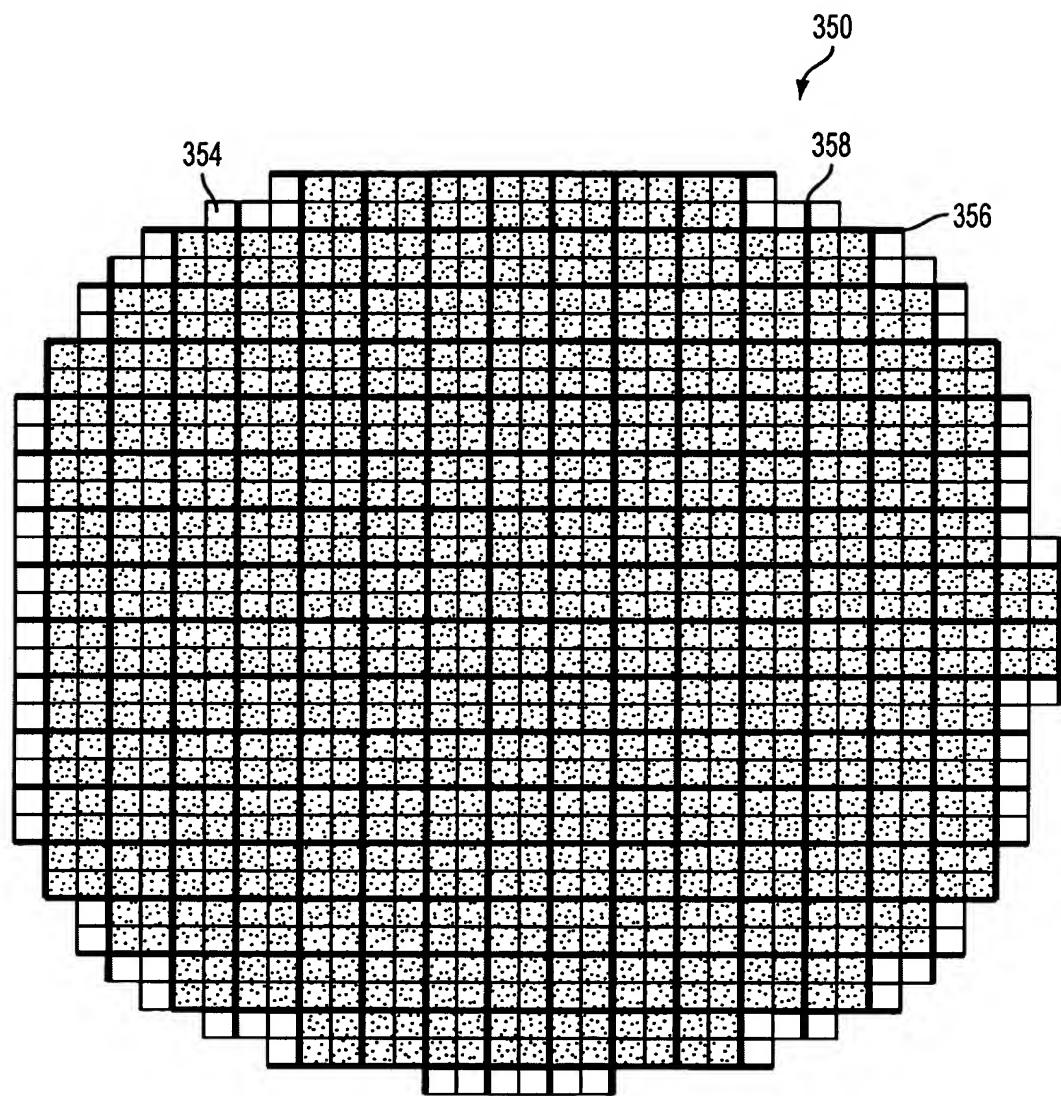


FIG. 35

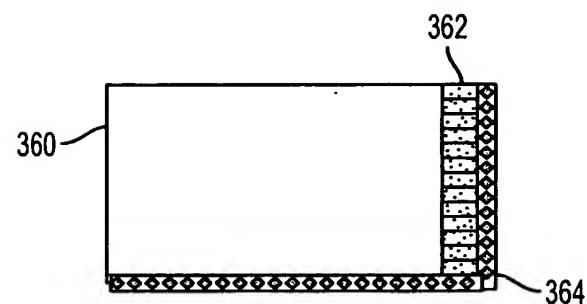


FIG. 36-A

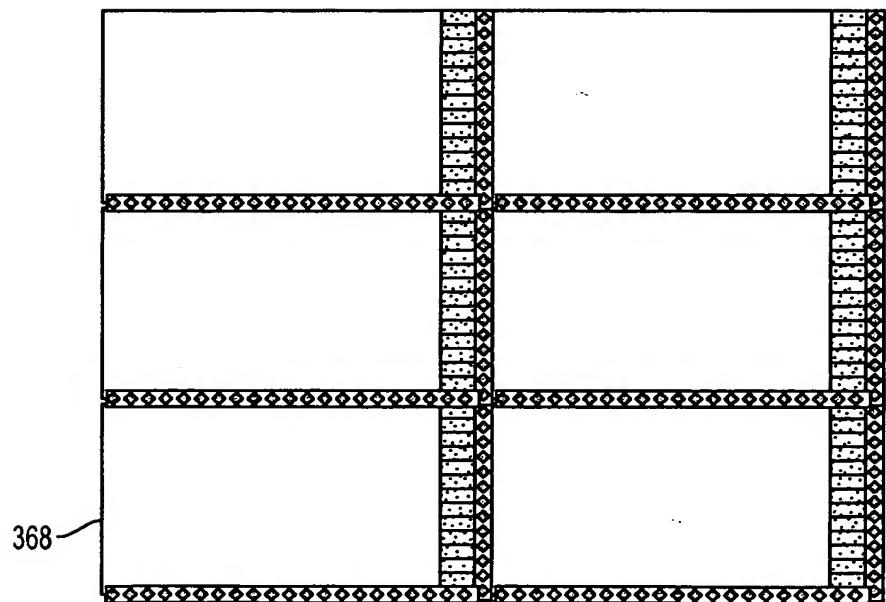


FIG. 36-B

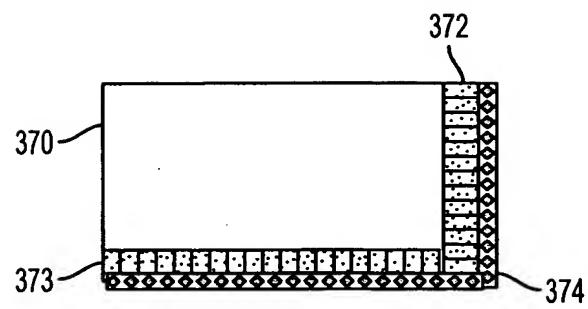


FIG. 37-A

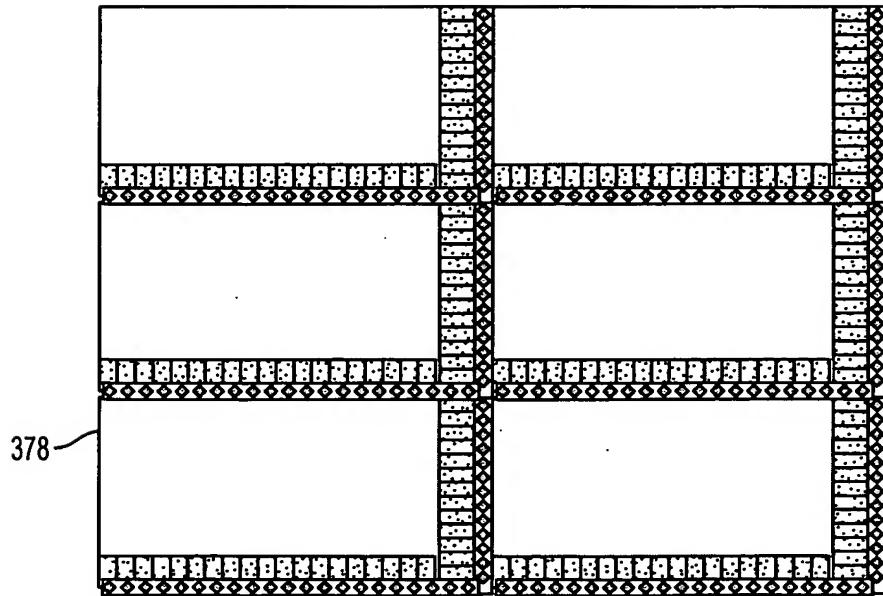


FIG. 37-B

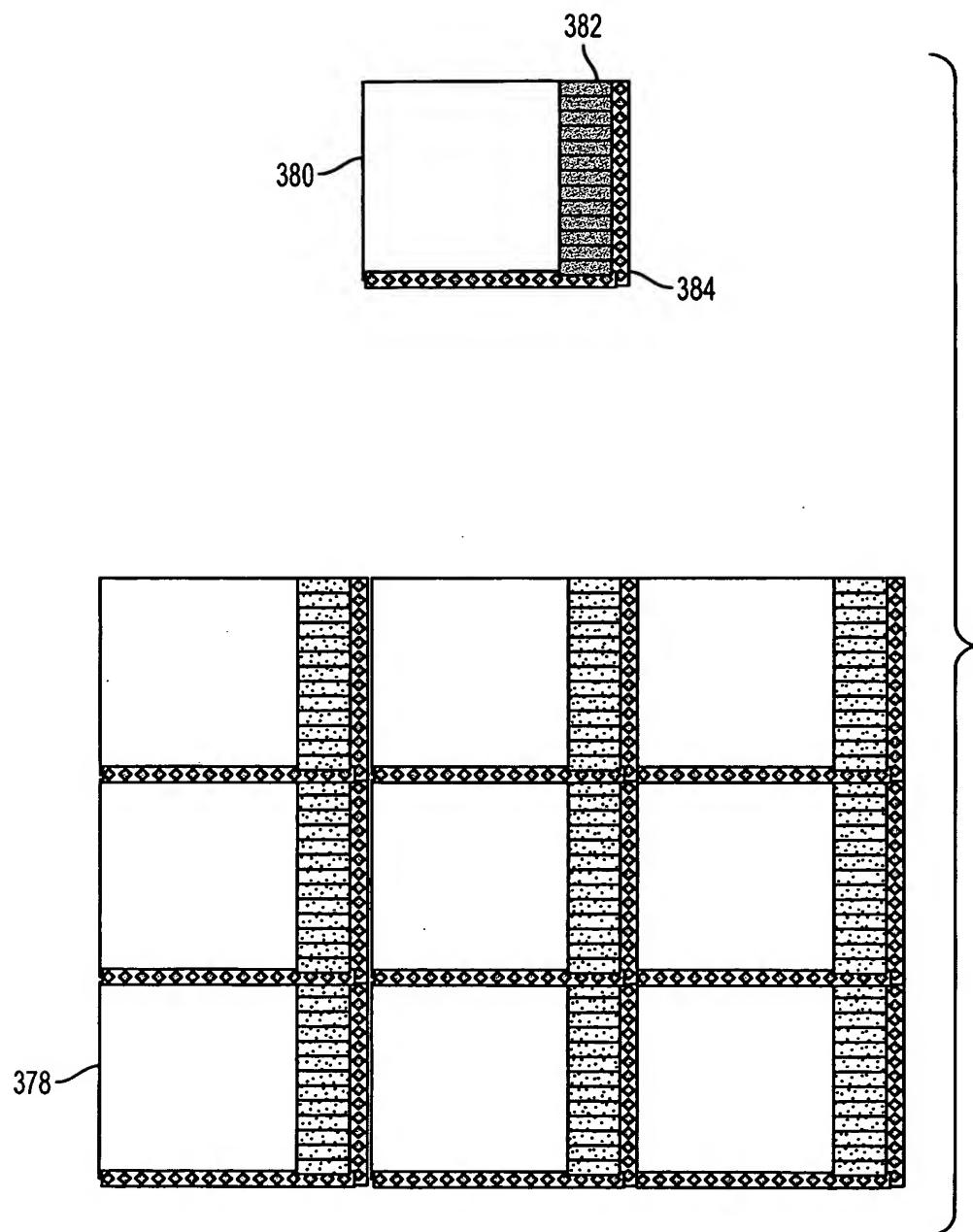


FIG. 38

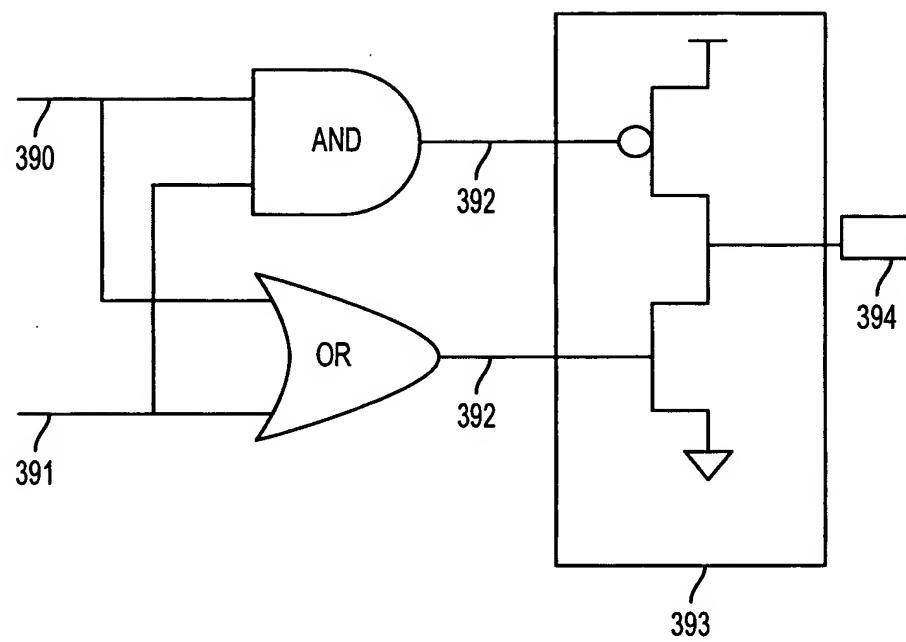


FIG. 39